SHARP SERVICE MANUAL

SERVICE MANUAL FOR EURO FUNCTION

MODEL
**ER-A440/A450
ER-A460/A470
ER-A490
ER-A550S
ER-A570/A610**

CONTENTS

Parts marked with "⚠" is important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

CHAPTER 1. ABOUT FOR EURO FUNCTION

In this section, it is described about common EURO functions of ECR.

The DISPLAY/PRINT SAMPLE and PROGRAMMING JOB of each models are described at the other section.

1. CURRENCY EXCHANGE (Exn) RATE

The CURRENCY EXCHANGE RATE is changed from "4integer+4decimal" to "3integer+6decimal".

[Programming]

(PGM mode)

Currency Exchange Rate programming

	A440/A450	A460/A470	A490	A550S	A570/A610
JOB#	1310	1310	1310	1310	1310

2. New CG of EURO Symbol

● **EURO character code = 207**

3. DOMESTIC CURRENCY SYMBOL

[Programming]

(SRV mode)

Domestic currency symbol programming

	A440/A450	A460/A470	A490	A550S	A570/A610
JOB#	986	915-A	915-A	915-A	915-A

4. FOREIGN (EX1) CURRENCY SYMBOL

● EURO symbol character code is added into the Chatacter Code Table.

● EURO symbol is used to print the EURO amount.

● ECR can use the EURO symbol character for the domestic currency symbol or exchange (EX1) currency symbol by below programming jobs.

● The selection of foreign currency symbol is supported only for EX1 (EURO) because the EURO is used at EX1 or Domestic currency.

(Notes)

● About Remote Printers and Slip printers
(ER-01RP/02RP/03RP/04RP, EPSON TM-295/300/T85, INDATEC SLIP etc...):
ECR cannot support to print EURO SYMBOL on Remote Printers and Slip Printers. The EURO symbol is not printed on them because they do not have EURO symbol themselves now.

[Programming]

(PGM mode)

Currency symbol for EX1 key programming

	A440/A450	A460/A470	A490	A550S	A570/A610
JOB#	2334	2680-F	2680-F	2680-F	2680-F

5. FOREIGN CURRENCY DRAWER

[Programming]

(PGM mode)

Exchange drawer No. programming

	A440/A450	A460/A470	A490	A550S	A570/A610
JOB#	2680	2680-E	2680-E	2680-E	2680-E

6. FOREIGN CURRENCY DRAWER OPEN function

This function is used to open the foreign currency drawer without any sales entry.

Case of Opening FOREIGN CURRENCY DRAWER

(1) At the timing of issuing receipt after tendering foreign currency amount.

(2) FOREIGN CURRENCY DRAWER OPEN function (THIS FUNCTION)

(3) At the timing of issuing XZ REPORT (included CCD)

[Purpose]

This function is used for opening the foreign currency drawer when the change due of a transaction is given by foreign currency just after a transaction.

[Operation]

Key entry sequence

---- EXn ----

[Entry conditions]

Operating modes that allow the entry: REG and MGR modes (It is not allowed in the VOID mode).

This operation cannot be mixed with other entries such as sales entry within a transaction, and it cannot be mixed with the non-add code entry.

[Action]

This operation opens the foreign currency drawer.

This operation is executed only when the foreign currency drawer is set.

This operation dose not have any counter and totalizer.

7. EX1 amount for TOTAL and CHANGE

● This function is selectable at PGM mode (PRINT or NOT).
If "NOT" is selected, the total is printed as domestic currency. (Current spec)
If "PRINT" is selected, TOTAL AMOUNT is printed both Domestic amount and EX1 amount (which is calculated by EX1 RATE).
But, EX1 amount is not printed when SUBTOTAL VOID is executed.

[Programming]

(PGM mode)

Printing of EX1 amount for Total and Change

	A440/A450	A460/A470	A490	A550S	A570/A610
JOB#	2616-X9-D	2680-A	2680-A	2680-A	2680-A

8. EX1 amount for TOTAL and TENDERING VP (NORMAL VP)

- This function is available only for VP of the finalized function (TO-TAL VP, MEDIA VP) in Normal VP.
  It is not available for the VP (ITEM VP, RA/PO VP etc) except the finalized function.

- When the VP of the finalized function (TOTAL VP, MEDIA VP) is executed, it is printed "TOTAL amount" and "EXCANGE1 amount" which is converted from the total amount.
  But, it does not print the EX1 amount at the VP (ITEM VP, RA/PO VP etc) without the finalized function.

- This function is selectable at PGM mode (PRINT or NOT).
  If "NOT" is selected, the VP format is same as the current spec.

- In case of "EX1 AMOUNT PRINT FOR TOTAL VP", Cashier/Clerk code and TIME are not printed at VP.

ER-A490/A570/A610:

- The CURRENCY DISCRIPTER is not printed on VP (because it dose not have any space).

- FRENCH CHECK, EURO CHECK, ENGLISH CHECK, GERMAN CHECK:
  This function is not available for FRENCH CHECK, EURO CHECK, ENGLISH CHECK and GERMAN CHECK because they do not have the printing space on their format.
  They print the domestic amount only.
  (It means to keep the current specification.)

[Programming]

(PGM mode)

JOB#2680-B: Printing of EX1 amount for Total and Tendering VP

	A440/ A450	A460/ A470	A490	A550S	A570/ A610
JOB#	2616-X9-E	2680-B	2680-B	2680-B	2680-B

9. FOREIGN CURRENCY (EXn) TAB

- It is selectable the TAB position for each EXCHANGE.

- The programmed TAB position is used to print and display the exchange amount.
  It is not referred when the exchange amount is calculated by the exchange rate.
  The exchange rate must be programmed as the rate for lowest digit.

  Ex)

  (1) Domestic Currency TAB = 2 , Foreign Currency TAB = 0
  In case of "Domestic Currency 1.00 is same as Foreign Currency 50", the exchange rate is 0.500000 ($\leftarrow$ 50 Foreign/100 Domestic).

  (2) Domestic Currency TAB = 2, Foreign Currency TAB = 1
  In case of "Domestic Currency 1.00 is same as Foreign Currency 50.0", the exchange rate is 5.000000 ($\leftarrow$ 500 Foreign/100 Domestic).
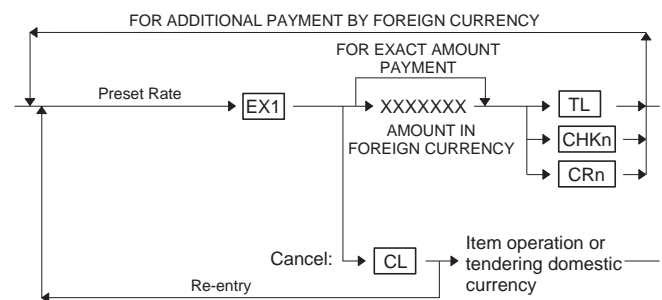
[Programming]

(PGM mode)

JOB#2330 : TAB for EXCHANGE keys

10. CHECK, CREDIT operation for EX1
EX1 Calculation method selection
## EX1 CHK+CR totalizer text

- This function is available only when either EURO currency or LOCAL currency is assigned to EX1.
  (It is available only while EURO status is (B) or (C).)

- The tendered amount of CHECK, CREDIT for EX1 is calculated to common totalizer (EXCHANGE1 CHECK+CREDIT SALES).

- The tendered amount of CHECK, CREDIT for EX1 is not sent to EFT terminal because it is not clear to be supported the entry of foreign currency (EURO) by EFT terminal.

- If this function is used under the EURO status (B) [EX1 as EURO], EX1 amount must be calculate by division for rate because it is decided that EURO exchange rate must be "1EURO=xx.xxxxxx LOCAL Currency".
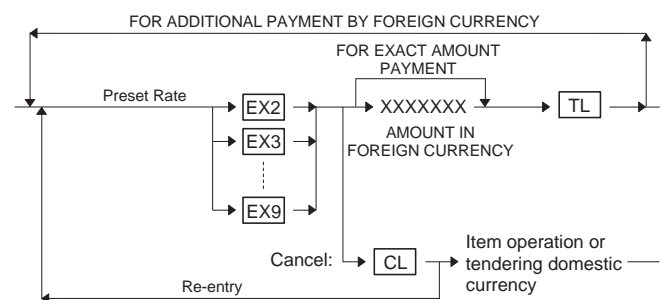
[Operation]

(1) EX1 (All models)

(2) EX2~ 4 (ER-A440/A450/A460/A470/A550S)
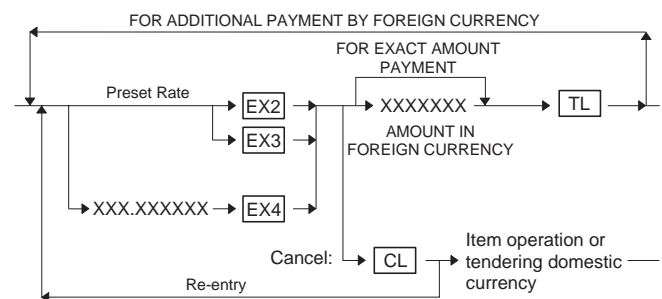
(3) EX2~ 9 (ER-A490/A570/A610/A650/A670)

[Programming]

(PGM mode)

CHECK, CREDIT operation for EX1

	A440/ A450	A460/ A470	A490	A550S	A570/ A610
JOB#	2616-X9-C	2680-C	2680-C	2680-C	2680-C

EX1 Calculation method

	A440/ A450	A460/ A470	A490	A550S	A570/ A610
JOB#	2616-X9-B	2680-D	2680-D	2680-D	2680-D

EX1 CHK+CR totalizer text

	A440/ A450	A460/ A470	A490	A550S	A570/ A610
JOB#	2314	2314	2314	2314	2314

11. CHANGING EURO FUNCTION

(Changing EURO Function)

X1/Z1 mode:

$$800 \rightarrow \boxed{\cdot} \rightarrow \boxed{\otimes} \rightarrow X \rightarrow \boxed{TL}$$

X: 1 = EURO STATUS (B)
    2 = EURO STATUS (C)
    3 = EURO STATUS (D)

About EURO STATUS are shown the following pages.

It is executing automatically to change from status (A) to status (B), (C), (D).

Selectable type is one of below 4 types.

And the selectable type is decided as below for each status.

CURRENT STATUS ↓	Selectable STATUS			
	(A)	(B)	(C)	(D)
(A)	—	×	×	×
(B)	—	—	×	×
(C)	—	—	—	×
(D)	—	—	—	—

Marked "×" is selectable

<Action>

It is executed some of below JOBs which is needed for each status.

1) Issue General Z1 report.

2) Issue General Z2 report.

3) Clear GT1/2/3.

4) Change PGM function "EX1 AMOUNT PRINTING FOR TOTAL AND CHANGE YES/NO".

5) Change PGM function "EX1 AMOUNT PRINTING FOR TOTAL VP YES/NO".

6) Change PGM function "EX1 CALCULATTION METHOD DIVISION/MULTIPLICATION".

7) Set "Domestic currency symbol" as EURO SYMBOL.

8) Set "Domestic TAB" as "2".

9) Set "EX1 currency symbol" as the suitable data.

10) Set "EX1 TAB" as the suitable data.

<Selecting type and its action>

Current status (A):

CURRENT STATUS (A)	Selected STATUS		
	(B)	(C)	(D)
1) General Z1 report	ISSUE	ISSUE	ISSUE
2) General Z2 report	ISSUE	ISSUE	ISSUE
3) GT1/2/3	—	CLEAR	CLAER
4) EX1 AMOUNT PRINTING FOR TOTAL AND CHANGE	"YES"	"YES"	"NO"
5) EX1 AMOUNT PRINTING FOR TOTAL VP	"YES"	"YES"	"NO"
6) EX1 CALCULATTION METHOD	"DIVISION"	"MULTI."	"MULTI."
7) Domestic currency symbol	—	[EURO]	[EURO]
8) Domestic TAB	—	"2"	"2"
9) EX1 currency symbol	[EURO]	The Current "Domestic currency symbol"	—
10) EX1 TAB	"2"	The Current "Domestic TAB"	—

Marked "—" is remaining the current data.

Current status (B):

CURRENT STATUS (B)	Selected STATUS		
		(C)	(D)
1) General Z1 report		ISSUE	ISSUE
2) General Z2 report		ISSUE	ISSUE
3) GT1/2/3		CLEAR	CLAER
4) EX1 AMOUNT PRINTING FOR TOTAL AND CHANGE		"YES"	"NO"
5) EX1 AMOUNT PRINTING FOR TOTAL VP		"YES"	"NO"
6) EX1 CALCULATTION METHOD		"MULTI."	"MULTI."
7) Domestic currency symbol		[EURO]	[EURO]
8) Domestic TAB		"2"	"2"
9) EX1 currency symbol		The Current "Domestic currency symbol"	[SPACE]
10) EX1 TAB		The Current "Domestic TAB"	—

Marked "—" is remaining the current data.

Current status (C):

CURRENT STATUS (C)	Selected STATUS		
			(D)
1) General Z1 report			ISSUE
2) General Z2 report			ISSUE
3) GT1/2/3			—
4) EX1 AMOUNT PRINTING FOR TOTAL AND CHANGE			"NO"
5) EX1 AMOUNT PRINTING FOR TOTAL VP			"NO"
6) EX1 CALCULATTION METHOD			"MULTI."
7) Domestic currency symbol			[EURO]
8) Domestic TAB			"2"
9) EX1 currency symbol			[SPACE]
10) EX1 TAB			—

Marked "—" is remaining the current data.

(Notes)

- This JOB cannot set below additional EURO function automatically.
  Below items must be set by each PGM JOB after this job.

  (1) EX1 RATE

  (2) "CHECK, CREDIT operation for EX1   Yes/No"

- INLINE SYSTEM:
  This job can be executed only at INLINE MASTER when the system is closed ("CLOSED STORE") because the currency unit must be changed for all machines at same time. And the "OPEN STORE" must be executed after completed this job because the currency is mixed in the system if this job (CHANGEING EURO) was not completed at some machine.

In this table, the local currency it described as DM. (The printing sample is a general format.)

STATUS		(A)	(B)	(C)	(D)
Handled currency of ECR	ITEMS (Goods)	DM	DM	EURO	EURO
	Tendering	DM Foreign [by EXn]	DM EURO [by EX1] Foreign [by EX2~]	EURO DM [by EX1] Foreign [by EX2~]	EURO Foreign [by EXn]
	Change	DM	DM	EURO (DM) [judged by cashier]	EURO
Display Currency	ITEMS	DM	DM	EURO	EURO
	TOTAL, CHANGE	DM	DM	EURO	EURO
Printing currency on Receipt	ITEMS	DM	DM	EURO	EURO
	TOTAL, CHANGE	DM	DM (EURO)	EURO (DM)	EURO
Printing currency on VP	ITEMS	DM	DM	EURO	EURO
	TOTAL	DM	DM (EURO)	EURO (DM)	EURO
EX1 Calculation method		Multiplication (Amount × Rate)	Division (Amount/Rate)	Multiplication (Amount × Rate)	Multiplication (Amount × Rate)
Rounding method of EXn	Domestic → Foreign	UP	4 (DOWN)/5 (UP)	4 (DOWN)/5 (UP)	4 (DOWN)/5 (UP)
	Foreign → Domestic	Down	4 (DOWN)/5 (UP)	4 (DOWN)/5 (UP)	4 (DOWN)/5 (UP)

Receipt Sample (Tendered by DM) ["c" = "EURO SYMBOL"]
 	
(It is a standard receipt. It may not be different from a receipt of this machine.)
		DEPT01 ∗1.00
		DEPT02 ∗2.00
		∗∗∗TOTAL ∗3.00
		CASH ∗5.00
		CHANGE ∗2.00
			DEPT01 ∗1.00
			DEPT02 ∗2.00
			∗∗∗TOTAL ∗3.00
			  c1.57
			CASH ∗5.00
			CHANGE ∗2.00
			  c1.04
				DEPT01 c0.52
				DEPT02 c1.04
				∗∗∗TOTAL c1.56
				  3.00
				EXCH1 1.917620
				  3.00
				CASH 4.00
				CHANGE c0.52
				  1.00	

Receipt Sample (Tendered by EURO) ["c"="EURO SYMBOL"]
 	
(It is a standard receipt. It may not be different from a receipt of this machine.)
			DEPT01 ∗1.00
			DEPT02 ∗2.00
			∗∗∗TOTAL ∗3.00
			  c1.57
			EXCH1 1.917620
			  c1.57
			CHECK c2.00
			CHANGE ∗0.82
			  c0.43
				DEPT01 c0.52
				DEPT02 c1.04
				∗∗∗TOTAL c1.56
				  3.00
				CASH c2.00
				CHANGE c0.44
				  0.84
					DEPT01 c0.52
					DEPT02 c1.04
					∗∗∗TOTAL c1.56
					CASH c2.00
					CHANGE c0.44

Currency of Report (X/Z)		DM	DM	EURO	EURO
Currency in DRAWER	Domestic Drawer	DM	DM	EURO	EURO
	Foreign Drawer	Foreign	EURO Foreign	DM Foreign	Foreign

NOTES:

<About RAM data compatibility>

ECR has the RAM data compatibility between current (NON EURO) machine and new (EURO) machine at the same model under below condition.

- The ONLINE system has the new TABLE NO. for uploading/downloading the new programming data.

- INLINE system:
  The downloading of the new programming data is executed by using the current PGM downloading jobs.

<OTHERS>

- The guidance message function of PGM JOBs (A460/A470/A490)
  ER-A460/A470/A490 has the guidance message function.
  But, they do not support about new PGM JOB.

CHAPTER 2. EURO FUNCTION-COMPATIBLE ROM TABLE

To perform Euro function, the conventional ROM needs to be changed to the following new ROM.

1. ER-A440

| ROM NAME | ROM | | | PWB UNIT | | Effective time |
	OLD	NEW (For EURO function)	LOCATION No.	PWB NAME	PWB PARTS CODE	
STANDARD ROM	VHI27020RAZ1A	VHI27020RAZ1B	IC7	MAIN PWB	CPWBN7551BH04	Jul. '98
OPTION ROM	—	—	—	—	—	—

2. ER-A450 (The model ER-Euro has a new ROM already installed.)

| ROM NAME | ROM | | | PWB UNIT | | Effective time |
	OLD	NEW (For EURO function)	LOCATION No.	PWB NAME	PWB PARTS CODE	
STANDARD ROM	—	VHI27040RBK1A	IC13	MAIN PWB	CPWBX9554BH02	Jul. '98
OPTION ROM	—	—	—	—	—	—

3. ER-A460/A470

| ROM NAME | ROM | | | PWB UNIT | | Effective time |
	OLD	NEW (For EURO function)	LOCATION No.	PWB NAME	PWB PARTS CODE	
STANDARD ROM	VHI27020RAU1C	VHI27020RAU1D	IC4	MAIN PWB	CPWBN7457BH02	Sep. '98
OPTION ROM (ER-A46R1)	VHI27010RAP1B	VHI27010RAP1D	IC101	MEMORY PWB	CPWBN7458BH01	

4. ER-A490

| ROM NAME | ROM | | | PWB UNIT | | Effective time |
	OLD	NEW (For EURO function)	LOCATION No.	PWB NAME	PWB PARTS CODE	
STANDARD ROM	VHI27040RAV1C	VHI27040RAV1D	IC11	MAIN PWB	CPWBX7466BH03	Sep. '98
OPTION ROM (ER-A49R1)	VHI27010RAS1B	VHI27010RAS1D	IC15	MEMORY PWB	CPWBN7469BH01	Sep. '98

5. ER-A550S (The ROM ER-A55R1 that was optionally available has been changed to standard equipment.)

| ROM NAME | ROM | | | PWB UNIT | | Effective time |
	OLD	NEW (For EURO function)	LOCATION No.	PWB NAME	PWB PARTS CODE	
STANDARD ROM	VHI27010RAF1D	VHI27010RAF1F	IC5 (ROM1)	MAIN PWB	CPWBN7287BH02	Sep. '98
OPTION ROM (ER-A55R1)	VHI27010RAI1A	VHI27010RAI1F	IC4 (ROM2)			

6. ER-A570

| ROM NAME | ROM | | | PWB UNIT | | Effective time |
	OLD	NEW (For EURO function)	LOCATION No.	PWB NAME	PWB PARTS CODE	
STANDARD ROM	VHI27040RAJ1E	VHI27040RAJ1F	IC5 (ROM1)	MAIN PWB	CPWBN7433BH01	Sep. '98
OPTION ROM (ER-A57R1)	VHI27020RAP1C	VHI27020RAP1F	IC7 (ROM2)			

7. ER-A610

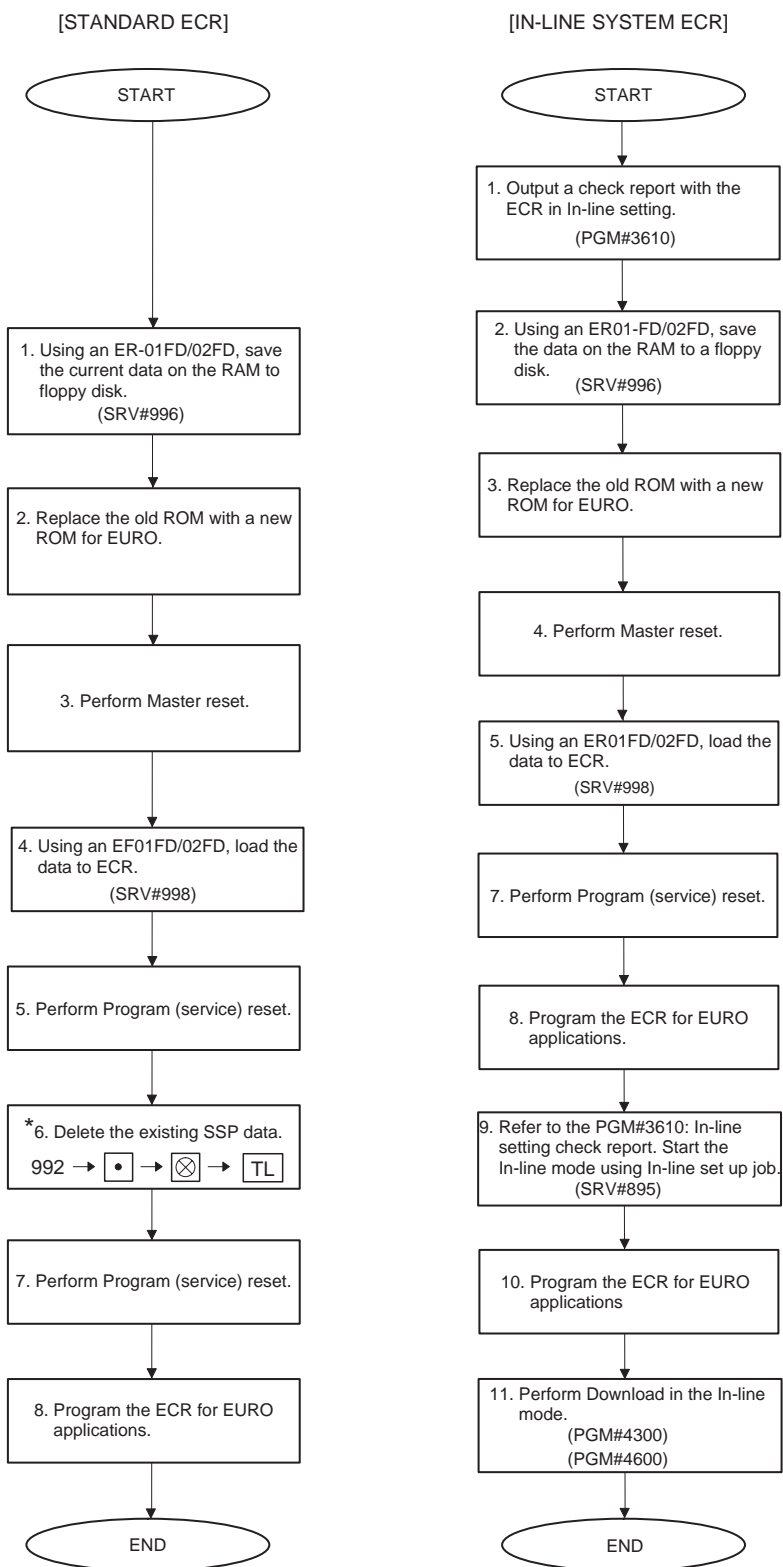| ROM NAME | ROM | | | PWB UNIT | | Effective time |
	OLD	NEW (For EURO function)	LOCATION No.	PWB NAME	PWB PARTS CODE	
STANDARD ROM	VHI27040RAI1E	VHI27040RAI1F	IC9 (ROM1)	MAIN PWB	CPWBX7430BH01	Sep. '98
OPTION ROM (ER-A61R1)	VHI27020RAN1C	VHI27020RAN1F	IC11 (ROM2)			

CHAPTER 3. ROM REPLACEMENT

Before trying to replace the ROM in the machine now available on the market, be sure to back up the data.

[STANDARD ECR]

START

1. Using an ER-01FD/02FD, save the current data on the RAM to floppy disk.
   (SRV#996)

2. Replace the old ROM with a new ROM for EURO.

3. Perform Master reset.

4. Using an EF01FD/02FD, load the data to ECR.
   (SRV#998)

5. Perform Program (service) reset.

*6. Delete the existing SSP data.

992 → • → ⊗ → TL

7. Perform Program (service) reset.

8. Program the ECR for EURO applications.

END

[IN-LINE SYSTEM ECR]

START

1. Output a check report with the ECR in In-line setting.
   (PGM#3610)

2. Using an ER01-FD/02FD, save the data on the RAM to a floppy disk.
   (SRV#996)

3. Replace the old ROM with a new ROM for EURO.

4. Perform Master reset.

5. Using an ER01FD/02FD, load the data to ECR.
   (SRV#998)

7. Perform Program (service) reset.

8. Program the ECR for EURO applications.

9. Refer to the PGM#3610: In-line setting check report. Start the In-line mode using In-line set up job.
   (SRV#895)

10. Program the ECR for EURO applications

11. Perform Download in the In-line mode.
   (PGM#4300)
   (PGM#4600)

END

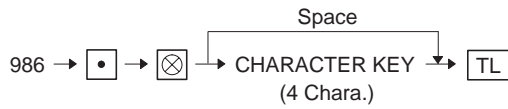* The SSP data for an old version ROM is included in the new version ROM.

CHAPTER 4. PROGRAMMING FOR EURO FUNCTION

1. ER-A440/A450

1-1. SERVICE MODE PROGRAMMING

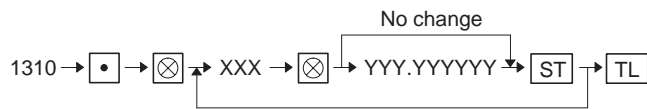#### 1) Domestic currency symbol programming

[JOB#986] MRS="_____＊"

Space

986 → ・ → ⊗ → CHARACTER KEY → TL
(4 Chara.)

＊ EURO character code = 207

1-2. PGM MODE PROGRAMMING

1) Programming of Exchange (EURO) rate
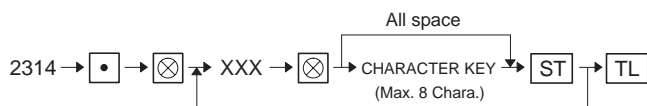
[JOB#1310] MRS=0

No change

1310 → ・ → ⊗ → XXX → ⊗ → YYY.YYYYYY → ST → TL

XXX: Function No.

YYY.YYYYYY: Exchange (EURO) rate

Function No.	Function	Entry range	Remarks
52	Exchange 1	0 to 999.999999 (3 id + 6 dd)	Exchange (EURO) rate
53	Exchange 2		
54	Exchange 3		

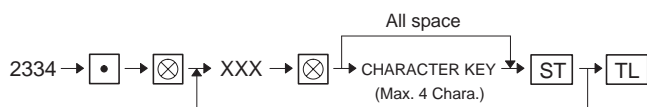#### 2) Programming of text for Exchange keys

[JOB#2314]

All space

2314 → ・ → ⊗ → XXX → ⊗ → CHARACTER KEY → ST → TL
(Max. 8 Chara.)

XXX: Function No.

Function No.	Function	Default (MRS)
140	EXCHANGE1 CHECK+CREDIT SALES	EX1CH+CR
141	DOMESTIC CURRENCY FOR EX1 CH+CR	DOM.CUR1

3) Programming of currency symbol for Exchange keys

[JOB#2334]

All space

2334 → ・ → ⊗ → XXX → ⊗ → CHARACTER KEY → ST → TL
(Max. 4 Chara.)

＊ EURO character code = 207

XXX: Function No.

Function No.	Function	Default (MRS)
52	Exchange 1	"SPACE"
53	Exchange 2	"SPACE"
54	Exchange 3	"SPACE"
55	Exchange 4	"SPACE"

4) Programming of EURO functions

[JOB#2616-X9] MRS=00000000

No change

2616 → ・ → ⊗ → XX → ⊗ → ABCDEFGH → ST → TL
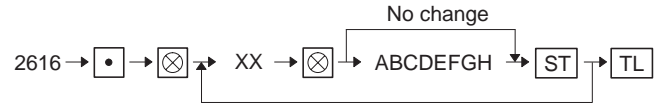
X:9

A: Not used (Fixed at "0")

B:

EXCHANGE1 Calculation method	B
Multiplication	0
Division	1

C:

CHECK, CREDIT operation for EX1	C
No	0
Yes	1

D:

Printing of EX1 amount for Total and Change	D
No	0
Yes	1

E:

Printing of EX1 amount for Total VP	E
No	0
Yes	1

F, G: Not used (Fixed at "00")

H (For ER-A440): Not used (Fixed at "0")

H (For ER-A450):

Footer graphic LOGO printing at the end of receipt	H
No	0
Yes	1

5) Programming of Exchange drawer

[JOB#2680] MRS=0

0

2680 → ・ → ⊗ → X → TL

X:

EXCHANGE DRAWER No.	X
Non	0
#1	1
#2	2

6) Programming of Tablation for Exchange keys

[JOB#2330] MRS = 2

2330 → • → ⊗ → XXX → ⊗ → A → ST → TL
(No change)

XXX: Function No.

Function No.	Function
52	Exchange 1
53	Exchange 2
54	Exchange 3
55	Exchange 4

A: TAB

TAB	A
0	0
0.0	1
0.00	2
0.000	3

2. ER-A460/A470

1-1. SERVICE MODE PROGRAMMING

Domestic currency symbol programming

[JOB#915] MRS=1020

915 → • → ⊗ → ABCD → TL
(0)
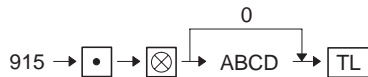
#915-A: 1. Amount symbol

1. Amount symbol	915-A	
"$"	0	
"∗"	1	★
"_"	2	
"EURO SYMBOL"	3	

#915-B: Not used (Fixed at "0")

#915-C: 1. Paper near end check

2. ST(−), ST(%) as many times needed/operation only once

1. Paper near end check	2. ST(−), ST(%) as many times needed/operation only once	915-B	
Yes	Unlimited	0	
	Once only	2	★
No	Unlimited	4	
	Once only	6	

#915-D: Not used (Fixed at "0")

1-2. PGM MODE PROGRAMMING

1) Programming of Exchange (EURO) rate

[JOB#1310] MRS=0

1310 → • → ⊗ → XXX → ⊗ → YYY.YYYYYY → ST → TL
(No change)

XXX: Function No.

YYY.YYYYYY: Exchange (EURO) rate

Function No.	Function	Entry range	Remarks
51	Exchange 1	0 to 999.999999 (3 id + 6 dd)	Exchange (EURO) rate
52	Exchange 2		
53	Exchange 3		

2) Programming of text for Exchange keys

[JOB#2314]

2314 → • → ⊗ → XXX → ⊗ → CHARACTER KEY (Max. 8 Chara.) → ST → TL
(All space)

XXX: Function No.

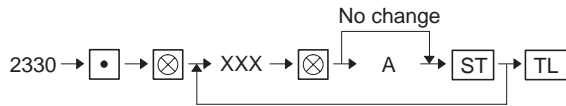| Function No.	Function	Default (MRS)
127	EXCHANGE1 CHECK+CREDIT SALES	EX1CH+CR
128	DOMESTIC CURRENCY FOR EX1 CH+CR	DOM.CUR1

3) Programming of EURO functions

[JOB#2680] MRS=000002

2680 → • → ⊗ → ABCDEF → TL
(0)

A:

Printing of EX1 amount for Total and Change	A
No	0
Yes	1

B:

Printing of EX1 amount for Total VP	B
No	0
Yes	1

C:

CHECK, CREDIT operation for EX1	C
No	0
Yes	1

D:

EXCHANGE1 Calculation method	D
Multiplication	0
Division	1

E:

EXCHANGE DRAWER No.	E
Non	0
#1	1
#2	2

F:

Currency symbol for EX1 key	F
"$"	0
"*"	1
"_"	2
"EURO SYMBOL"	3

4) Programming of Tablation for Exchange keys
[JOB#2330] MRS = 2

XXX: Function No.

Function No.	Function
51	Exchange 1
52	Exchange 2
53	Exchange 3
54	Exchange 4

A: TAB

TAB	A
0	0
0.0	1
0.00	2
0.000	3

3. ER-A490

1-1. SERVICE MODE PROGRAMMING

1) Domestic currency symbol programming
[JOB#915] MRS=1020
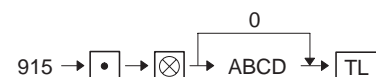
#915-A: 1. Printing of total amount at addition+single item receipt

2. Amount symbol

1. Printing of total amount at addition+single item receipt	2. Amount symbol	915-A	
Yes	"$"	0	
	"＊"	1	★
	"_"	2	
	"EURO SYMBOL"	3	
No	"$"	4	
	"＊"	5	
	"_"	6	
	"EURO SYMBOL"	7	

#915-B: 1. Printing of refund on the S/D receipt

2. PO system

1. Printing of refund on the S/D receipt	2. PO system	915-B	
No	Mixed entry	0	★
	Cash only entry	1	
Yes	Mixed entry	4	
	Cash only entry	5	

#915-C: 1. ST(–), ST(%) as many times needed/operation only once

2. RA system

1. ST(–), ST(%) as many times needed/operation only once	2. RA system	915-C	
Unlimited	Mixed entry	0	
	Cash only entry	2	★
Once only	Mixed entry	4	
	Cash only entry	6	

#915-D: 1. S/D receipts are issued by the number of a multiplier

2. Incrementing the consecutive number for each item in S/D+Addition receipt

3. Printing on S/D receipt for multiplication entry

1. S/D receipts are issued by the number of a multiplier	2. Incrementing the consecutive number for each item in S/D+Addition receipt	3. Printing on S/D receipt for multiplication entry	915-C	
No	No	One line	0	
		Normal	1	
	Yes	One line	2	★
		Normal	3	
Yes	No	One line	4	
		Normal	5	
	Yes	One line	6	
		Normal	7	

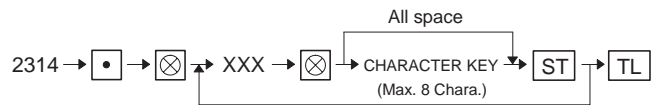## 1-2. PGM MODE PROGRAMMING

1) Programming of Exchange (EURO) rate
[JOB#1310] MRS=0
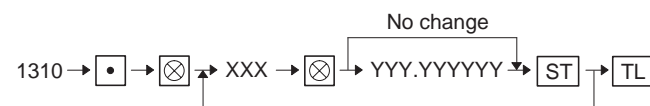
XXX: Function No.

YYY.YYYYYY: Exchange (EURO) rate

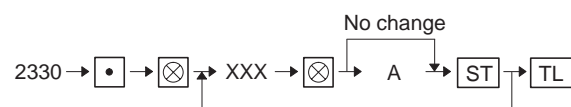| Function No.	Function	Entry range	Remarks
60	Exchange 1		
61	Exchange 2		
62	Exchange 3		
63	Exchange 4	0 to 999.999999	Exchange (EURO) rate
64	Exchange 5	(3 id + 6 dd)	
65	Exchange 6		
66	Exchange 7		
67	Exchange 8		
68	Exchange 9		

2) Programming of text for Exchange keys

[JOB#2314]

2314 → [•] → [⊗] → XXX → [⊗] → CHARACTER KEY (Max. 12 Chara.) → [ST] → [TL]

(No change)

XXX: Function No.

Function No.	Function	Default (MRS)
276	EXCHANGE1 CHECK+CREDIT SALES	EX1CH+CR
277	DOMESTIC CURRENCY FOR EX1 CH+CR	DOM.CUR1

3) Programming of EURO functions

[JOB#2680] MRS=000002

2680 → [•] → [⊗] → ABCDEF (0) → [TL]

A:

Printing of EX1 amount for Total and Change	A
No	0
Yes	1

B:

Printing of EX1 amount for Total VP	B
No	0
Yes	1

C:

CHECK, CREDIT operation for EX1	C
No	0
Yes	1

If "CHECK, CREDIT operation for EX1" is select at "Yes", it needs a few seconds until terminating this job because ER-A490 creates new records which is used by new function in the transaction and cashier files at this JOB. It may be occurred the MEMORY FULL error. In this case, it must be change the file allocation (ex. decrease PLU records) at SRV mode programming (JOB#971).

D:

EXCHANGE1 Calculation method	D
Multiplication	0
Division	1

E:

EXCHANGE DRAWER No.	E
Non	0
#1	1
#2	2

F:

Currency symbol for EX1 key	F
"$"	0
"＊"	1
"⎽"	2
"EURO SYMBOL"	3

4) Programming of Tablation for Exchange keys

[JOB#2330] MRS = 2 (Same as SRV#902-D)

2330 → [•] → [⊗] → XXX → [⊗] → A (No change) → [ST] → [TL]
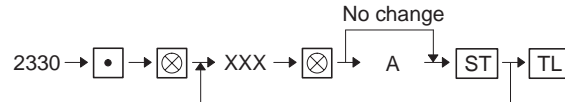
XXX: Function No.

| Function No.	Function
60	Exchange 1
61	Exchange 2
62	Exchange 3
63	Exchange 4
64	Exchange 5
65	Exchange 6
66	Exchange 7
67	Exchange 8
68	Exchange 9

A: TAB

TAB	A
0	0
0.0	1
0.00	2
0.000	3

4. ER-A550S

1-1. SERVICE MODE PROGRAMMING

1) Domestic currency symbol programming

[JOB#915] MRS=1020

915 → [•] → [⊗] → ABCD (0) → [TL]
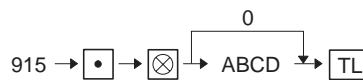
#915-A: 1. Amount symbol

1. Amount symbol	915-A	
"$"	0	
"＊"	1	★
"⎽"	2	
"EURO SYMBOL"	3	

#915-B: Not used (Fixed at "0")

#915-C: 1. ST(−), ST(%) as many times needed/operation only once

1. ST(−),ST(%) as many times needed/operation only once	915-B	
Unlimited	0	
Once only	2	★

#915-D: Not used (Fixed at "0")

1-2. PGM MODE PROGRAMMING

1) Programming of Exchange (EURO) rate
[JOB#1310] MRS=0

$$1310 \rightarrow \boxed{\bullet} \rightarrow \boxed{\otimes} \rightarrow XXX \rightarrow \boxed{\otimes} \rightarrow \overset{0}{YYY.YYYYYY} \rightarrow \boxed{ST} \rightarrow \boxed{TL}$$
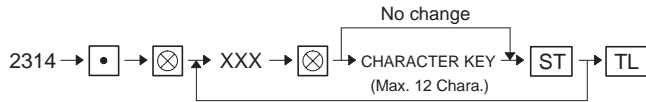
XXX: Function No.

YYY.YYYYYY: Exchange (EURO) rate

Function No.	Function	Entry range	Remarks
51	Exchange 1	0 to 999.999999 (3 id + 6 dd)	Exchange (EURO) rate
52	Exchange 2		
53	Exchange 3		

2) Programming of text for Exchange keys
[JOB#2314]

$$2314 \rightarrow \boxed{\bullet} \rightarrow \boxed{\otimes} \rightarrow XXX \rightarrow \boxed{\otimes} \rightarrow \overset{\text{All space}}{\underset{\text{(Max. 8 Chara.)}}{\text{CHARACTER KEY}}} \rightarrow \boxed{ST} \rightarrow \boxed{TL}$$

XXX: Function No.

Function No.	Function	Default (MRS)
119	EXCHANGE1 CHECK+CREDIT SALES	EX1CH+CR
120	DOMESTIC CURRENCY FOR EX1 CH+CR	DOM.CUR1

3) Programming of EURO functions
[JOB#2680] MRS=000002

$$2680 \rightarrow \boxed{\bullet} \rightarrow \boxed{\otimes} \rightarrow \overset{0}{ABCDEF} \rightarrow \boxed{TL}$$

A:

Printing of EX1 amount for Total and Change	A
No	0
Yes	1

B:

Printing of EX1 amount for Total VP	B
No	0
Yes	1

C:

CHECK, CREDIT operation for EX1	C
No	0
Yes	1

D:

EXCHANGE1 Calculation method	D
Multiplication	0
Division	1

E:

EXCHANGE DRAWER No.	E
Non	0
#1	1
#2	2

F:

Currency symbol for EX1 key	F
"$"	0
"＊"	1
"_"	2
"EURO SYMBOL"	3

4) Programming of Tablation for Exchange keys
[JOB#2330] MRS = 2

$$2330 \rightarrow \boxed{\bullet} \rightarrow \boxed{\otimes} \rightarrow XXX \rightarrow \boxed{\otimes} \rightarrow \overset{0}{A} \rightarrow \boxed{ST} \rightarrow \boxed{TL}$$

XXX: Function No.

| Function No.	Function
51	Exchange 1
52	Exchange 2
53	Exchange 3
54	Exchange 4

A: TAB

TAB	A
0	0
0.0	1
0.00	2
0.000	3

5. ER-A570/A610

1-1. SERVICE MODE PROGRAMMING

1) Domestic currency symbol programming
[JOB#915] MRS=1020

$$915 \rightarrow \boxed{\bullet} \rightarrow \boxed{\otimes} \rightarrow \overset{0}{ABCD} \rightarrow \boxed{TL}$$
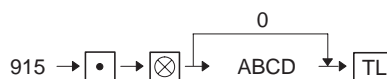
#915-A: 1. Amount symbol

1. Amount symbol	915-A	
"$"	0	
"＊"	1	★
"_"	2	
"EURO SYMBOL"	3	

#915-B: 1. PO system

1. PO system	915-B	
Mixed entry	0	★
Cash only entry	1	

#915-C: 1. ST(−), ST(%) as many times needed/operation only once

   2. RA system

1. ST(−), ST(%) as many times needed/operation only once	2. RA system	915-C	
Unlimited	Mixed entry	0	
	Cash only entry	1	★
Once only	Mixed entry	2	
	Cash only entry	3	

#915-D: Not used (Fixed at "0")

1-2. PGM MODE PROGRAMMING

1) Programming of Exchange (EURO) rate
[JOB#1310]   MRS=0
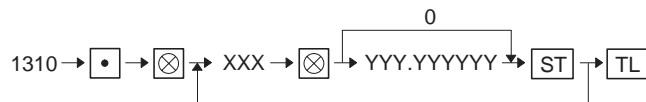
XXX: Function No.

YYY.YYYYYY: Exchange (EURO) rate

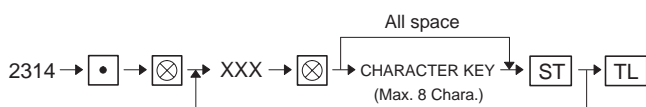| Function No.	Function	Entry range	Remarks
68	Exchange 1		
69	Exchange 2		
70	Exchange 3		
71	Exchange 4	0 to 999.999999	Exchange
72	Exchange 5	(3 id + 6 dd)	(EURO) rate
73	Exchange 6		
74	Exchange 7		
75	Exchange 8		
76	Exchange 9		

2) Programming of text for Exchange keys
[JOB#2314]

XXX: Function No.

<For ER-A570/610>
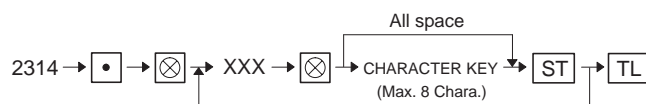
Function No.	Function	Default (MRS)
305	EXCHANGE1 CHECK+CREDIT SALES	EX1CH+CR
306	DOMESTIC CURRENCY FOR EX1 CH+CR	DOM.CUR1

3) Programming of EURO functions
[JOB#2680]   MRS=000002

A:

Printing of EX1 amount for Total and Change	A
No	0
Yes	1

B:

Printing of EX1 amount for Total VP	B
No	0
Yes	1

C:

CHECK, CREDIT operation for EX1	C
No	0
Yes	1

D:

EXCHANGE1 Calculation method	D
Multiplication	0
Division	1

E:

EXCHANGE DRAWER No.	E
Non	0
#1	1
#2	2

F:

Currency symbol for EX1 key	F
"$"	0
"＊"	1
"_"	2
"EURO SYMBOL"	3

4) Programming of Tablation for Exchange keys
[JOB#2330]   MRS = 2

XXX: Function No.

Function No.	Function
68	Exchange 1
69	Exchange 2
70	Exchange 3
71	Exchange 4
72	Exchange 5
73	Exchange 6
74	Exchange 7
75	Exchange 8
76	Exchange 9

A: TAB

TAB	A
0	0
0.0	1
0.00	2
0.000	3

SHARP   SERVICE MANUAL

ER-A440/A450
ONLINE COMMUNICATION FUNCTION

ELECTRONIC CASH REGISTER

ER-A440
MODEL ER-A450

(For "V" version)

CONTENTS

Parts marked with "⚠" is important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

SHARP CORPORATION

CHAPTER 1. OVERVIEW

1. GENERAL

This is a specification of the on-line data communication via RS-232 interface of the ER-A440/A450.
It enables the ER-A440/A450 to perform on-line communication.
For on-line data communication a ER-A440/A450 can be connected to a host computer. Also, their connection can be made via modems.
We support mainly the following functions.

a) The function of ONLINE

    1) Down load of ECR data   (ECR ← PC)

    2) Up load of ECR data   (ECR → PC)

    3) RJE (Remote job entry) function (ECR ← PC)

    4) ELECTRONIC MAIL function   (ECR ← PC)

CHAPTER 2. SYSTEM CONFIGURATION

1. GENERAL

Online data communication is allowed only when RS232 channel presets at PGM2 mode.

2. Online data communication

(a) Direct connection

Host computer   ER-A440/A450

Host computer   Modem   Modem   ER-A440/A450
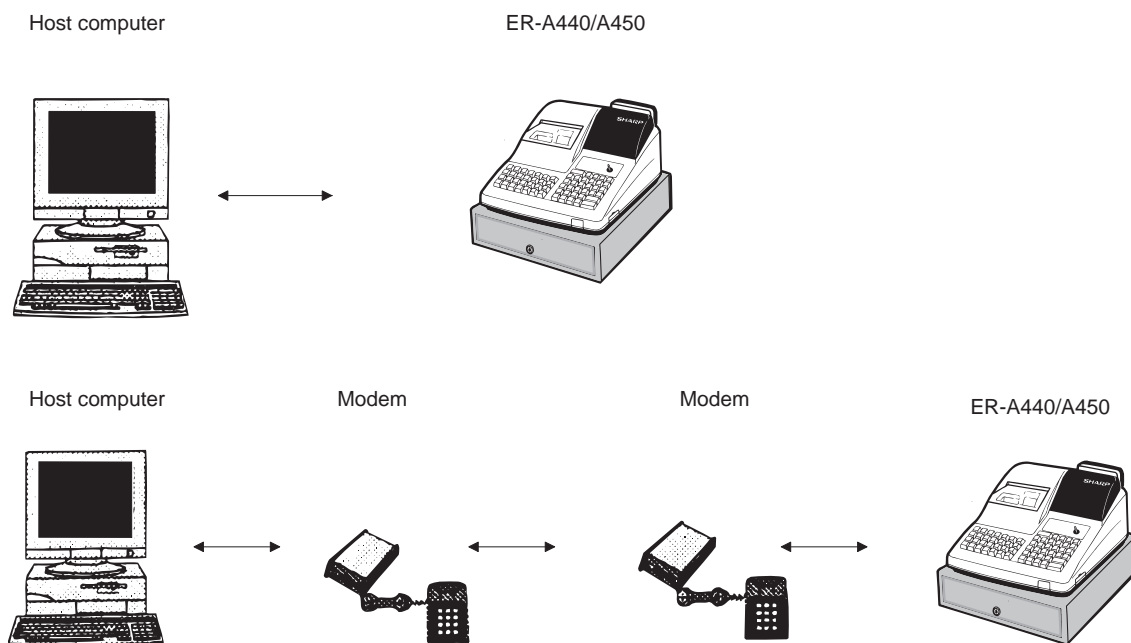
* The picture of ECR is shown the ordinary ECR.
(It may not be same design as ER-A440/A450.)

CHAPTER 3. SPECIFICATIONS OF RS-232 INTERFACE

1. Online interface

a) Interface : RS-232

b) Duplex type : Half-duplex / Full-duplex

c) Line configuration : Direct connection/Modem connection

d) Data rate : 19200, 9600, 4800, 2400, 1200, 600 and 300 bps (Programable)

e) Synchronizing mode : Asynchronous

f) Parity check : Vertical parity check (odd)

g) Code : ASCII

h) Bit sequence : LSB first

i) Data format : 1 start bit + 7 data bits + 1 parity + 1 stop bit

	b1	b2	b3	b4	b5	b6	b7	P		

Start-bit   Data-bit   Parity-bit   Stop-bit
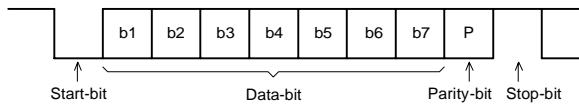
j) Protocol : Polling/selecting (Simple procedure)

k) Transmission line :

    Cable : Shielded cable

    Connector (ECR side) : D-sub 9 pin (female type) connector Inch pitch (4-40 UNC) lock screw

    Connector cover : Shielded cover

The table shows the relationship between the data rate and the recommended cable length.

Data rate	Recommended cable length
19,200 bps	3.75 meters
9,600 bps	7.5 meters
4,800 bps	15 meters
2,400 bps	30 meters
1,200 bps	60 meters

CHAPTER 4. SIGNAL CONNECTION DIAGRAM

1. Connection between the master (Host) and Satellite
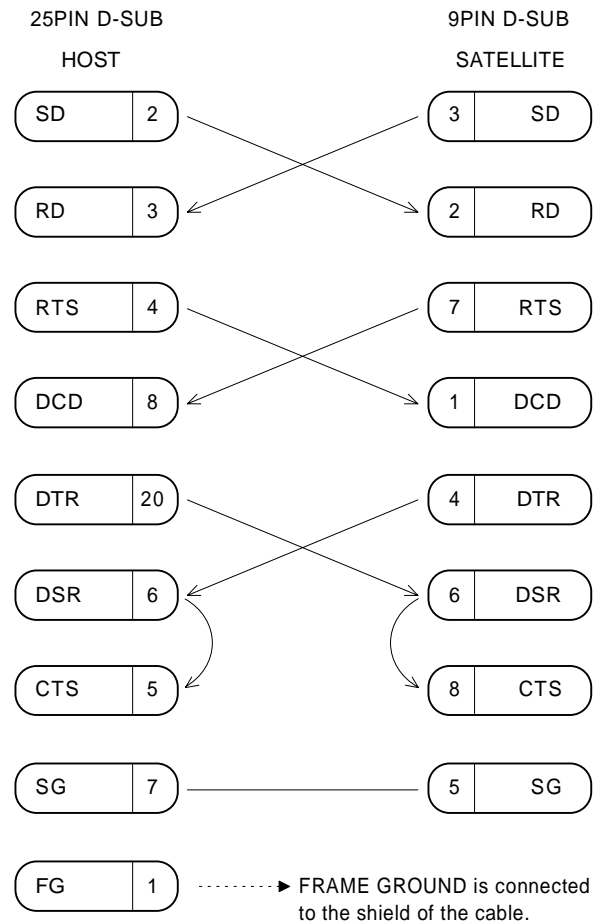
SD : TRANSMITTED DATA
RD : RECEIVED DATA
DTR : DATA TERMINAL READY
DSR : DATA SET READY
RTS : REQUEST TO SEND
DCD : DATA CARRIER DETECTOR
CTS : CLEAR TO SEND
FG : FRAME GROUND

✱ If the connector of Host side is "9 PIN D-SUB", the pin number is same as Satellite side.

2. Connection between the terminal and MODEM
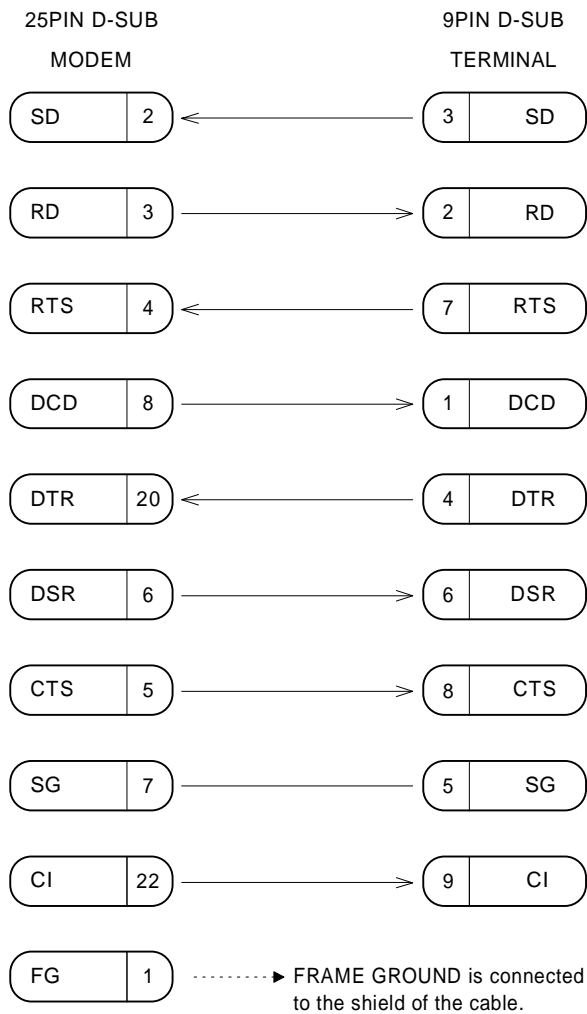
25PIN D-SUB   9PIN D-SUB

MODEM   TERMINAL

| SD | 2 | ← | 3 | SD |

| RD | 3 | → | 2 | RD |

| RTS | 4 | ← | 7 | RTS |

| DCD | 8 | → | 1 | DCD |

| DTR | 20 | ← | 4 | DTR |

| DSR | 6 | → | 6 | DSR |

| CTS | 5 | → | 8 | CTS |

| SG | 7 | — | 5 | SG |

| CI | 22 | → | 9 | CI |

| FG | 1 | ·······▶ FRAME GROUND is connected to the shield of the cable. |

SD : TRANSMITTED DATA
RD : RECEIVED DATA
DTR : DATA TERMINAL READY
DSR : DATA SET READY
RTS : REQUEST TO SEND
DCD : DATA CARRIER DETECTOR
CTS : CLEAR TO SEND
CI : CALLING INDICATOR
FG : FRAME GROUND

CHAPTER 5. RS-232 PROTOCOL

1. Basic protocol specification

1) Data transmission from the host to a satellite

Host   Satellite

(1) Inquines of the satellite.

Dummy   Terminal No.   ENQ
(3bytes)   (6bytes)

(2) Receives ENQ.
Checks the terminal No.
to see if it is its own.

(4) Receives ACK.

(3) Sends ACK.

ACK

(5) Sends the text.block.

Start code   Text (parameter)   End code

(6) Receives text.
Checks the check sum,text
data,etc. And goes to (8)
if there is no error in them.

Text (DATA)

(8)' Sends NAK if any error
occurs.

NAK

(7) Resends the text block if NAK is received.
Resends the text block up to two times.
Sends EOT and terminates the operation
with error if NAK is still received after the
second resending of text block.

(8) Sends ACK.

ACK

(9) Sends the next text if ACK is received and
sends EOT and waits for ENQ.

EOT

(10) Terminates the operation if EOT
is received.

ENQ

ACK

Continued on the
next page

– 4 –

2) Data transmission from satellite to the host

Host   Satellite

(1) Inquines of the satellite.

Dummy (3bytes)   Terminal No. (6bytes)   ENQ

(2) Receives ENQ.
Check the terminal No.
to see if it is its own.

(4) Receives ACK.

ACK

(3) Sends ACK.

(5) Sends the text.block.

Start code   Text (parameter)   End code

(6) Receives text.
Checks the check sum,text
data,etc. And goes to (8)
if there is no error in them.

Three types of text block formats are available

Text (FDS)

Text (DATA)

(8)' Sends NAK if any error
occurs.

NCK

(7) Resends the text block if NAK is received.
Resends the text block up to two times.
Sends EOT and terminates the operation
with error if NAK is still received after the
second resending of text block.

(8) Sends ACK.

ACK

(9) Sends the next text if ACK is received and
sends EOT and terminates the operation if
data transfer is finaiized.

EOT

(10) Terminates the operation if EOT
is received.

Host   Satellite

(12) Sends text corresponding
        to the job code.

Start code   Text (FDS)   End code

Two types of
text block
formats are
available.

(13) Receives text.
        Checks the check sum, text lingth, text data, etc.
        And goes to (15) if there is no error in them.
        Sends NAK if any error occurs.

Text (DATA)

NAK

(When an error
occurs)

(14) Resends text block if NAK is received.
        Resends text up to two times,and
        performs error handling if NAK is still
        received after the second resending
        of text block.

(15) Sends ACK.

ACK

(16) Sinds the next text if ACK is received,
        and sends EOT and terminates the
        operation if data transfer is finalized.

EOT

(17) Terminates the operation if EOT is received.

Note : For the description of
       each data block see section
       4 (Text block formats)

2. Transmission control procedure matrix

1) Down-loading matrix for the host

STATE / EVENT	Initial	After sending ID ENQ	After sending text
	0	1	2
ENQ	—	—	—
ACK	—	Sends text and goes to 2.	Sends text and goes to 2. Sends EOT and then goes to 0. (Normal end)
NAK	—	—	Resends the text and then goes to 2. If the host has resent the text two times, it sends EOT and goes to 0. (ERROR END)
EOT	—	—	The host goes to 0. (ERROR END)
TEXT	—	—	—
TIME-UP	—	Resends ID ENQ and then goes to 1. If the host has resent ID ENQ two times,it sends EOT and goes to 0. (ERROR END)	Resends the text and then goes to 2. If the host has resent the text two times,it sends EOT and goes to 0. (ERROR END)
KEY ENTRY	Sends ID ENQ and goes to 1.	—	—

Time-up: One second after sending of ID ENQ.
Four seconds after sending of text.

2) Up-loading matrix for the host

EVENT \ STATE	Initial 0	After sending ID ENQ 1	After sending text 2
ENQ	—	—	—
ACK	—	Sends text and goes to 2.	Sends EOT and goes to 3.
NAK	—	—	Resends the text and then goes to 2. If the host has resent the text two times, it goes to 0. (ERROR END)
EOT	—	—	The host goes to 0. (ERROR END)
TEXT	—	—	—
TIME-UP	—	Resends ID ENQ and then goes to 1. If the host has resent ID ENQ two times, it goes to 0. (ERROR END)	Resends the text and then goes to 2. If the host has resent the text two times, it goes to 0. (ERROR END)
KEY ENTRY	Sends ID ENQ and goes to 1.	—	—

Time-up: One second after sending of ID ENQ.
   Four seconds after sending of text.

EVENT \ STATE	After sending EOT 3	After sending ACK 4	After sending NAK 5
ENQ	Sends ACK and goes to 4.	After the host has received ENQ, resends ACK and goes to 4. After the host has received TEXT, ignores the ENQ.	—
ACK	—	—	—
NAK	—	—	—
EOT	The host goes to 0 (ERROR END)	After the host has received TEXT, goes to 0. (Normal end) After the host has received ENQ, goes to 0.(ERROR END)	The host goes to 0. (ERROR END)
TEXT	—	The host checks the text block, if the block is correct, the host sends ACK and goes to 4. If it is not correct, the host sends NAK and goes to 5. If transmission cannot be continued, the host sends EOT and goes to 0.	The host checks the checks the text block, if the block is correct, the host sends ACK and goes to 4. If it is not correct, the host sends NAK and goes to 5. If transmission cannot be continued, the host sends EOT and goes to 0. (ERROR END)
TIME-UP	Resends EOT and goes to 3. If the host has resent the EOT two times, it goes to 0. (ERROR END)	The host goes to 0. (ERROR END) Time-up is 7 seconds	The host goes to 0. (ERROR END) Time-up is 7 seconds
KEY ENTRY	—	—	—

Time-up: Two second after sending of EOT.

3) Down-loading matrix for the sattelite

STATE EVENT	Initial 0	After sending ACK 1	After sending NAK 2
ID-ENQ	Satellite checks the terminal No.:If it is correct, satellite sends ACK and goes to 1. If it is not correct, Satellite ignores the ID-ENQ.	Satellite checks the terminal No.:If it is correct, satellite sends ACK and goes to 1. If it is not correct, Satellite ignores the ID-ENQ.	—
ACK	—	—	—
NAK	—	—	—
EOT	—	After satellite has received TEXT, goes to 0. (Normal end) Before satellite has received TEXT, ignores the EOT	Satellite goes to 0. (ERROR END)
TEXT	—	Satellite checks the text block, if the block is correct, Satellite sends ACK and goes to 1. If it is not correct, satellite sends NAK and goes to 2. If transmission cannot be continued, satellite sends EOT and goes to 0. (ERROR END)	Satellite checks the text block, if the block is correct, Satellite sends ACK and goes to 1. If it is not correct, satellite sends NAK and goes to 2. If transmission cannot be continued, satellite sends EOT and goes to 0. (ERROR END)
TIME-UP	—	Satellite sends EOT, and goes to 0. (ERROR END) Time-up is 7 seconds	The host goes to 0. (ERROR END) Time-up is 7 seconds

4) Up-loading matrix for the satellite

STATE / EVENT	Initial / 0	After receiving ID-ENQ and sending ACK. / 1	After sending NAK / 2
ID-ENQ	Satellite checks the terminal No.:If it is correct, satellite sends ACK and goes to 1. If it is not correct, satellite ignores the ID-ENQ.	Satellite checks the terminal No.:If it is correct, satellite sends ACK and goes to 1. If it is not correct, satellite ignores the ID-ENQ.	—
ACK	—	—	—
NAK	—	—	—
EOT	—	—	Satellite goes to 0. (ERROR END)
TEXT	—	Satellite checks the text block, if the block is correct, satellite sends ACK and goes to 3. If it is not correct, Satellite sends NAK and goes to 2. If transmission cannot be continued, satellite sends EOT and goes to 0. (ERROR END)	Satellite checks the text block, if the block is correct, Satellite sends ACK and goes to 3. If it is not correct, Satellite sends NAK and goes to 2. If transmission cannot be continued, satellite sends EOT and goes to 0. (ERROR END)
TIME-UP	—	Satellite goes to 0. (ERROR END) Time-up is 7 seconds	Satellite goes to 0. (ERROR END) Time-up is 7 seconds

STATE / EVENT	After receiving text and sending ACK / 3	After sending ENQ / 4	After sending TEXT / 5
ID-ENQ	—	—	—
ACK	—	Satellite sends the text and goes to 5.	Satellite sends the text and goes to 5, or sends the EOT and goes to 0. (Normal END)
NAK	—	—	Resends the text and then goes to 5. If satellite has resent the text two times, sends EOT and goes to 0. (ERROR END)
EOT	Satellite sends ENQ and goes to 4.	Resends the ENQ and then goes to 4. If Satellite has resent the ENQ two times, sends EOT and goes to 0. (ERROR END)	Satellite goes to 0. (ERROR END)
TEXT	Satellite checks the text block, if the block is correct, satellite sends ACK and goes to 3. If it is not correct, satellite sends NAK and goes to 2. If transmission cannot be continued, satellite sends EOT and goes to 0. (ERROR END)	—	—
TIME-UP	The host goes to 0. (ERROR END) Time-up is 7 seconds	Resends the ENQ and then goes to 4. If satellite has resent the ENQ two times, sends EOT and goes to 0. (ERROR END)	Resends the text and then goes to 5. If satellite has resent the text two times, sends EOT and goes to 0. (ERROR END)

Time-up: Four seconds after sending of text.
　　　　 Two second after sending of ENQ.

CHAPTER 6. CONTROL SIGNAL SEQUENCE

1. Online transmission

1) Half duplex transmission

```
DCE    DTE
 ←     SD                                    DATA
 →     RD              DATA
 ←     RTS
 →     CTS
 →     DSR
 →     DCD
 ←     DTR                                              < 100ms
 →     CI                 < 500ms
```

2) Full duplex transmission

```
DCE    DTE
 ←     SD                              DATA
 →     RD                    DATA
 ←     RTS
 →     CTS
 →     DSR
 →     DCD
 ←     DTR                                          < 100ms
 →     *CI            < 500ms
```
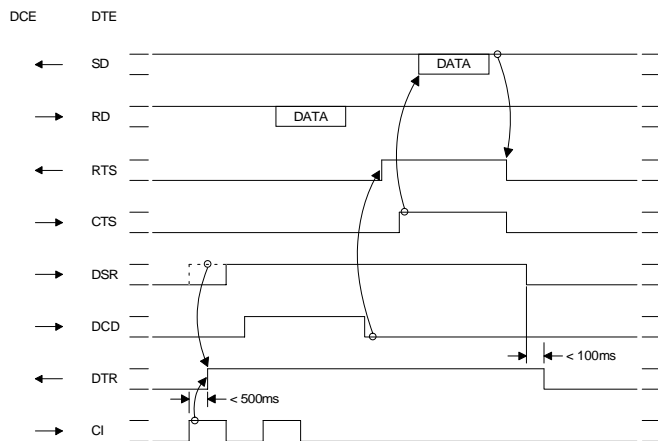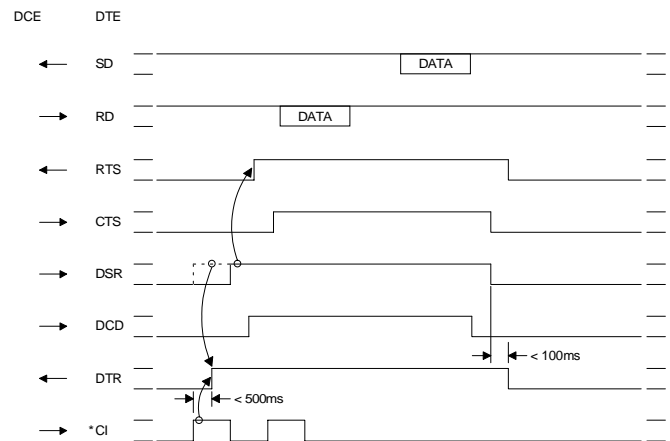
*Note: In the direct connect mode, same as full duplex control, but the CI signal is not controlled.

3) Line connection sequence flow

```
                    STARTED BY P.C

                      INITIAL

                   CI SENSE ?  ── NO
                      │ YES
          NO ──    CI ON ?
                      │
                    DTR ON                        ERROR :  NO LINE
                      │                                    DTR OFF
          NO          NO            YES
       DSR ON ? ──  CI SENSE ? ── TIME OUT ? ── YES
                      │                         30sec
                    YES
          NO     FULL DUPLEX ?
                      │ YES
                    RTS ON
                      │
               LINE ESTABLISHED
```
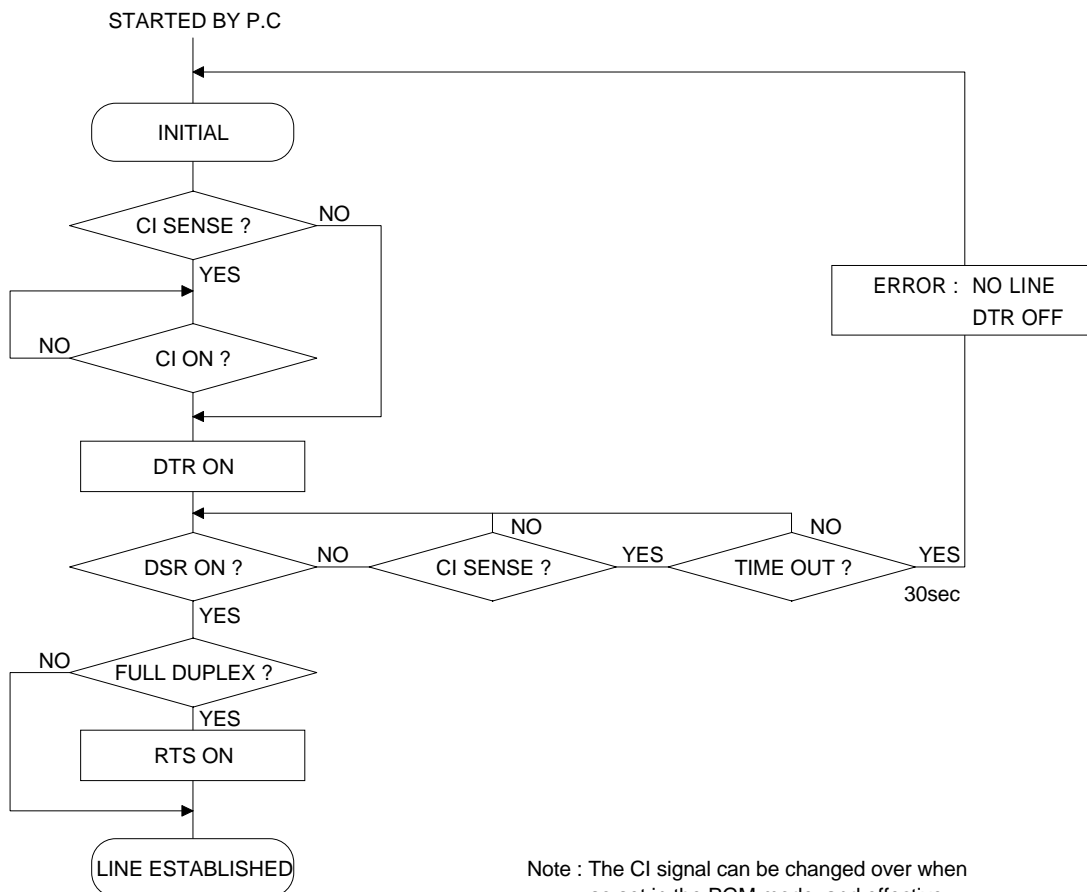
Note : The CI signal can be changed over when
       so set in the PGM mode, and effective
       at ECR side.

4) Transmission sequence flow

```
                    ┌─────────────────────┐
                    │  LINE ESTABLISHED   │
                    └─────────────────────┘
                              │
          YES        ┌────────────────┐
    ◄────────────────┤  FULL DUPLEX ? │
                     └────────────────┘
                         │ NO            NO
                         │◄──────────────────────────┐
                  ┌────────────┐          ┌────────────────┐   YES
                  │  DCD OFF ? ├─────────►│   TIME OUT ?   ├───────►
                  └────────────┘          └────────────────┘
                       │ YES                    5 sec
                  ┌────────────┐
                  │   RTS ON   │
                  └────────────┘
                        │
   ◄────────────────────┼───────────────────────────┐
              ┌────────────┐                         ▲
              │  DSR ON ?  ├─────────────────────────┼──────────►
              └────────────┘                         │
                   │ YES                             │
              ┌────────────────┐                     │
              │  FULL DUPLEX ? │                     │
              └────────────────┘                     │
                   │ YES               NO            │
              ┌────────────┐     ┌────────────────┐  │  YES
              │  DCD ON ?  ├────►│   TIME OUT ?   ├──┼──────────►
              └────────────┘     └────────────────┘  │
                   │ YES              30 sec          │ NO
              ┌────────────┐                   ┌────────────────┐
              │  CTS ON ?  ├──────────────────►│   TIME OUT ?   │
              └────────────┘                   └────────────────┘
                   │ YES                         │ YES  7 sec (Programmable)
          NO  ┌────────────┐        YES    ┌──────────────┐     ┌──────────────┐
    ◄─────────┤  TXRDY ?   │    ◄──────────┤     FULL     │     │   DTR OFF    │
              └────────────┘               │   DUPLEX ?   │     │   RTS OFF    │
                   │ YES                    └──────────────┘     └──────────────┘
         ┌──────────────────┐                   │                     │
         │ SEND 1 CHARACTER │              ┌──────────┐          ┌──────────────┐
         └──────────────────┘              │  RTS OFF │          │ TRANSMIT ERROR│
                   │                        └──────────┘          └──────────────┘
          YES ┌──────────┐                       │
    ◄─────────┤  MORE TO │              ┌─────────────────────┐
              │  SEND ?  │              │  LINE ESTABLISHED   │
              └──────────┘              └─────────────────────┘
                   │
          YES ┌────────────────┐
    ◄─────────┤  FULL DUPLEX ? │
              └────────────────┘
                   │
            ┌──────────────┐
            │  WAIT 100ms  │
            └──────────────┘
            ┌──────────────┐
            │   RTS OFF    │
            └──────────────┘
                   │
         ┌─────────────────────┐
         │  LINE ESTABLISHED   │
         └─────────────────────┘
```
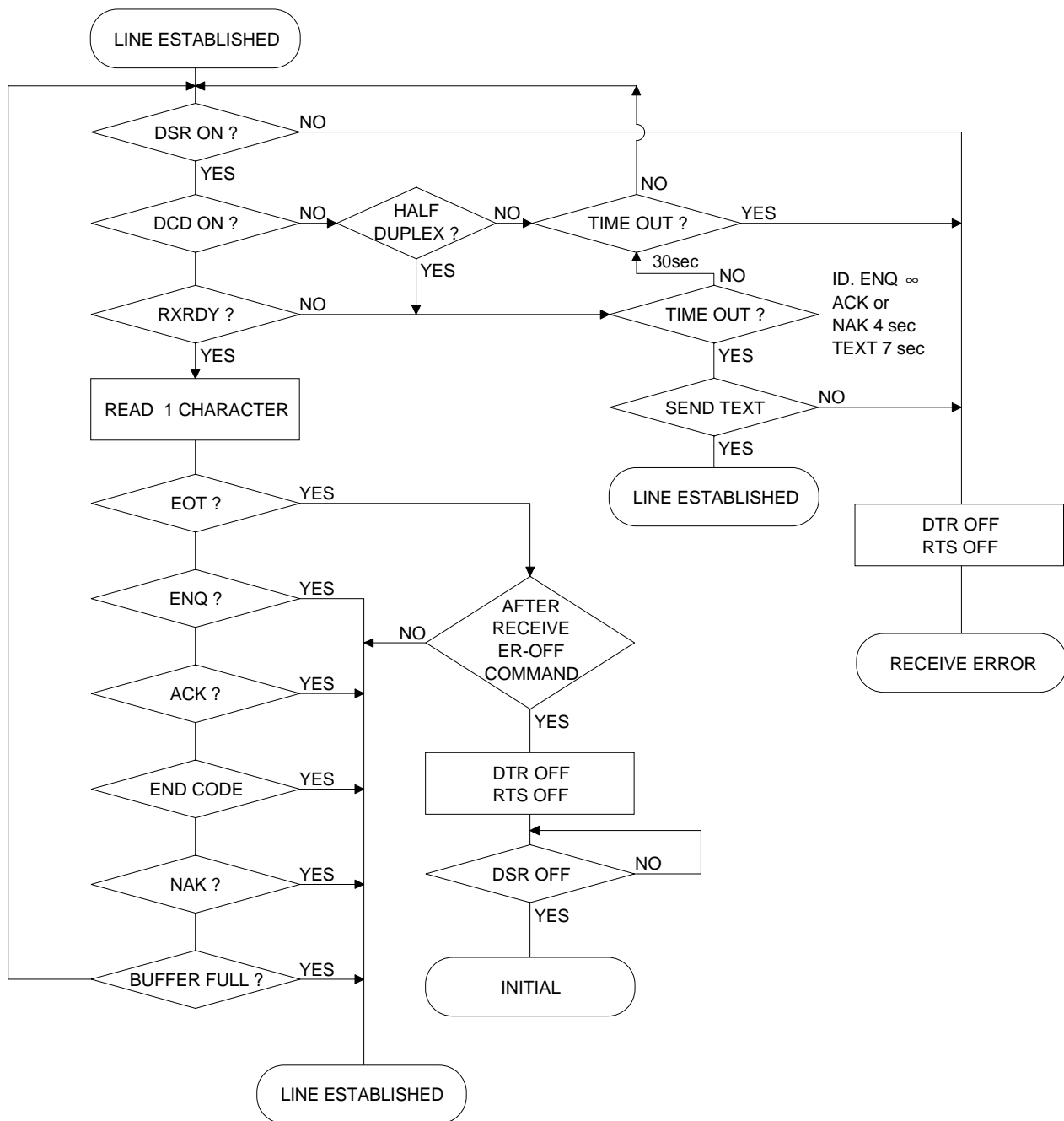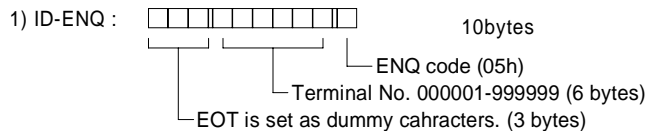
– 12 –
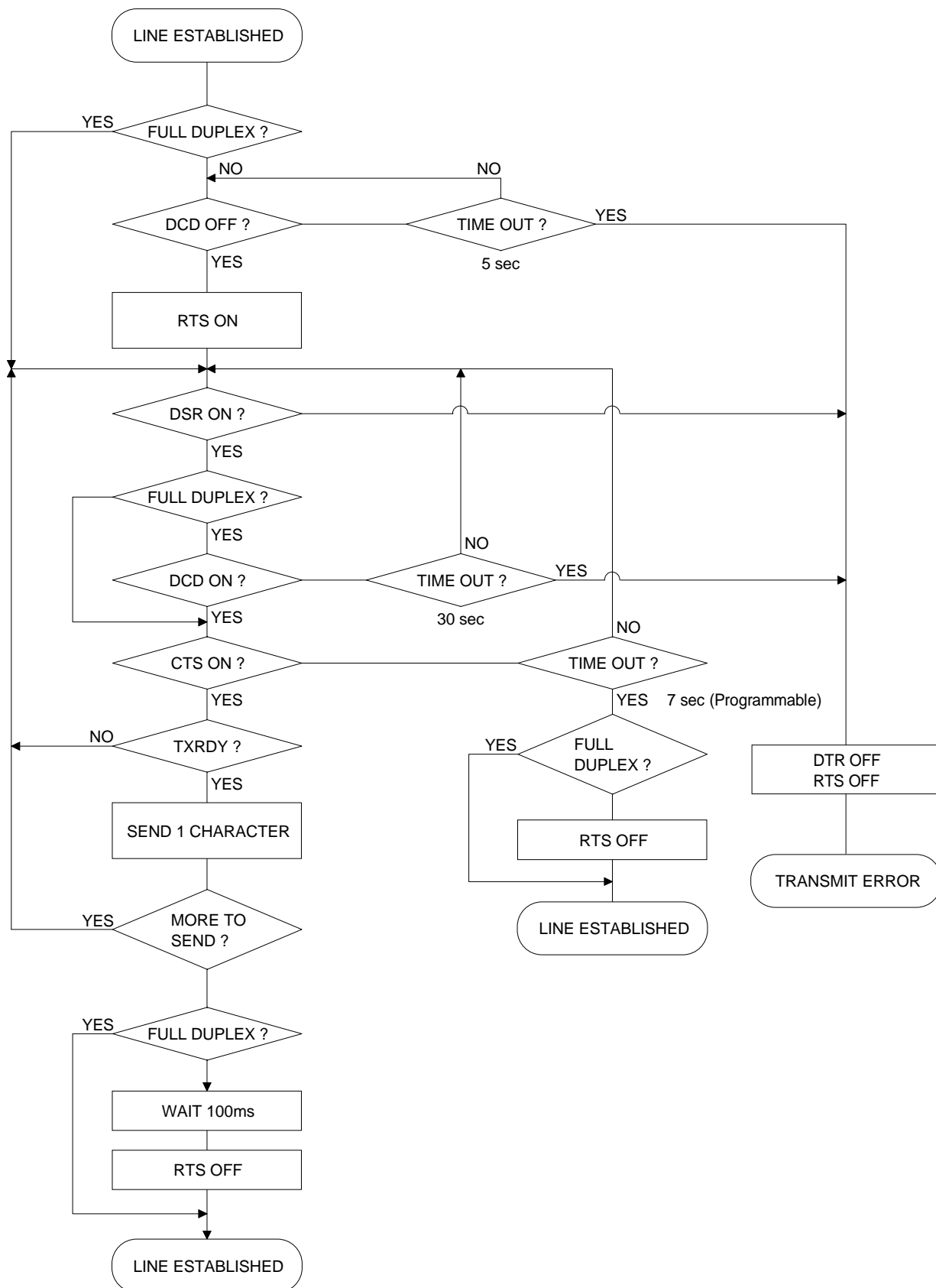
5) Receiving sequence flow

```
                    ┌──────────────────────┐
                    │  LINE ESTABLISHED    │
                    └──────────┬───────────┘
                               │
         ┌─────────────────────┤
         │              ┌──────◇──────┐        NO
         │              │  DSR ON ?   │─────────────────────┐
         │              └──────┬──────┘                     │
         │                  YES│                            │
         │                     │              NO            │
         │              ┌──────◇──────┐   ┌────◇─────┐      │
         │              │  DCD ON ?   │NO │  HALF    │ NO ┌─◇────────┐  YES
         │              │             │──▶│ DUPLEX ? │───▶│TIME OUT ?│──────▶
         │              └──────┬──────┘   └────┬─────┘    └────┬─────┘
         │                  YES│             YES│          30sec│ NO
         │                     │                │               │
         │              ┌──────◇──────┐ NO      │          ┌────◇─────┐  ID. ENQ ∞
         │              │  RXRDY ?    │─────────┴─────────▶│TIME OUT ?│  ACK or
         │              └──────┬──────┘                    └────┬─────┘  NAK 4 sec
         │                  YES│                              YES│       TEXT 7 sec
         │              ┌──────┴───────────┐              ┌──────◇──────┐  NO
         │              │ READ 1 CHARACTER │              │ SEND TEXT   │──────▶
         │              └──────┬───────────┘              └──────┬──────┘
         │                     │                              YES│
         │              ┌──────◇──────┐ YES                ┌─────┴──────────┐
         │              │   EOT ?     │───────────┐        │LINE ESTABLISHED│
         │              └──────┬──────┘           │        └────────────────┘
         │                     │                  │
         │              ┌──────◇──────┐ YES        │
         │              │   ENQ ?     │──────────┐ │
         │              └──────┬──────┘          │ │       ┌──────────────┐
         │                     │          ┌──────◇─────┐   │  DTR OFF     │
         │              ┌──────◇──────┐   │  AFTER     │   │  RTS OFF     │
         │              │   ACK ?     │YES│  RECEIVE   │   └──────┬───────┘
         │              └──────┬──────┘──▶│  ER-OFF    │          │
         │                     │       NO │  COMMAND   │   ┌──────┴───────┐
         │              ┌──────◇──────┐   └──────┬─────┘   │RECEIVE ERROR │
         │              │  END CODE   │YES     YES│        └──────────────┘
         │              └──────┬──────┘──▶ ┌──────┴───────┐
         │                     │           │  DTR OFF     │
         │              ┌──────◇──────┐YES │  RTS OFF     │
         │              │   NAK ?     │───▶└──────┬───────┘
         │              └──────┬──────┘    ┌──────◇──────┐ NO
         │              ┌──────◇──────┐YES │  DSR OFF    │──────┐
         └──────────────│BUFFER FULL ?│──▶ └──────┬──────┘      │
                        └──────┬──────┘        YES│
                               │           ┌──────┴───────┐
                        ┌──────┴─────────┐ │   INITIAL    │
                        │LINE ESTABLISHED│ └──────────────┘
                        └────────────────┘
```

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CHAPTER 7. DATA BLOCK FORMAT

1. Basic format

1) ID-ENQ : ☐☐☐☐☐☐☐☐☐☐   10bytes

                     └ ENQ code (05h)
               └ Terminal No. 000001-999999 (6 bytes)
      └ EOT is set as dummy cahracters. (3 bytes)

2) ACK : ☐ 1 byte 06h

3) NAK : ☐ 1 byte 15h

4) EOT : ☐ 1 byte 04h

5) ENQ : ☐ 1 byte 05h

6) TEXT : ☐☐☐☐☐☐☐☐☐☐

           Data ASCII (max. 250 bytes)
                                   └ End code
         └ Block consecutive No.   └ Check sum
       └ Start code
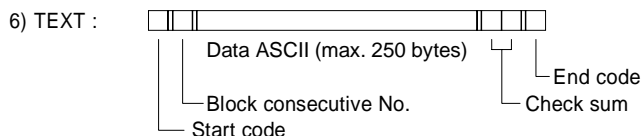
Start code : This code may not be provided. Null is impermissible.

End code : This code may not be provided. Null or any same code as the start code is not permissible.

When master reset is performed, the default is assumed:

Start code = 02h

End code = 0Dh

Block consecutive No. : This number starts with 30h and cycles like this: 30h, 31h — 39h, 30h, 31h (Ring counter system)

Check sum : 2 bytes hex number Low-order 8-bit data of the complement of 2 for the sum of text data.

RAM data: : Even number of data that is obtained by dividing one byte of RAM data into high-order 4 bits and low-order 4 bits and converting them to ASCII codes shown in the code conversion table.

Code conversion table .

Print code (high-order or low-order 4 bits)		Line image
Bit image	Hexadecimal	ASCII
0000	0	30h
0001	1	31h
0010	2	32h
0011	3	33h
0100	4	34h
0101	5	35h
0110	6	36h
0111	7	37h
1000	8	38h
1001	9	39h
1010	A	41h
1011	B	42h
1100	C	43h
1101	D	44h
1110	E	45h
1111	F	46h

Example

	1	2	3	
Memory image	02	5A	F0	

	1		2		3		
Line image	30h	32h	35h	41h	46h	30h	
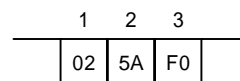
◄ - - - - - - - - - - Transmission sequence
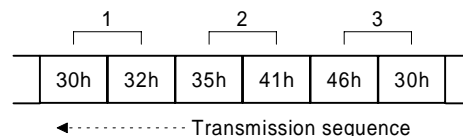
CHAPTER 8. ONLINE application

1. ONLINE preset

1) SRV programming: NONE

2) PGM programming

Job#	PGM-MODE programming for online operation
2690	The assignment of RS232 channel by each devices.
6110	Programming of the terminal number
6111	Programming of the modem control
6112	Programming of the transmission data rate (Bau rate)
6113	Programming of the start and end code.
6115	Programming of time out value
6110	Online Preset reading

[JOB#2690] MRS = 0000
The assignment of RS232 channel by each devices.

2690 → • → ⊗ → X → ⊗ → ABCD → ST → TL
                                 0
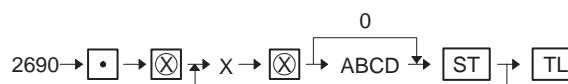
X: 1

A:
On-line	2690-A
No	0
Yes (Channel No. = 8)	8

[JOB#6110] MRS = 000001
Programming of the terminal number

6110 → • → ⊗ → NK → TL
                         0

NK: Terminal No. = 0 to 999999

[JOB#6111] MRS = 00

Programming of the modem control

```
                          0
6111 →  •  →  ⊗  ┌──────────┐→  TL
               AB
```
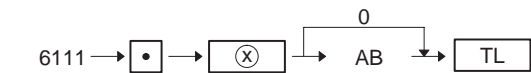
6111-A: 1. Sensing of the CI signal Yes/No

1. Sensing of the CI signal	6111-A
No	0
Yes	1

6111-B: 1. Duplex type

1. Duplex type	6111-B
Full duplex system	0
Half duplex system	1

[JOB#6112] MRS = 5

Programming of the transmission baud rate

```
                          0
6112 →  •  →  ⊗  ┌──────────┐→  TL
               A
```
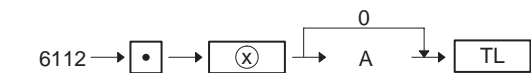
6112-A: Transmission baud rate

Transmission baud rate	6112-A
300 bps	0
600 bps	1
1200 bps	2
2400 bps	3
4800 bps	4
9600 bps	5
19200 bps	6

[JOB#6113] MRS = 002013

Programming of the start and end code

```
                          0
6113 →  •  →  ⊗  ┌──────────┐→  TL
             XXXYYY
```
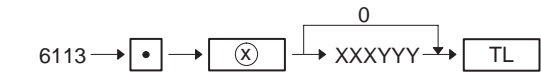
XXX: Start code = 02H (STX)
YYY: End code = 0DH (CR)

[JOB#6115] MRS = 007

Programming at the time-out value.

```
6115 →  •  →  ⊗  →  XXX  →  TL
```
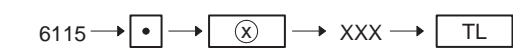
XXX: 1 ~ 255 sec

[JOB#6110]

Online preset reading

```
6110 →  ⊗  →  TL
```

SHARP PROGRAMMING MANUAL

ELECTRONIC CASH REGISTER

ER-A440
MODEL **ER-A450**

(For "V" version)
SRV KEY: LKGIM7113RCZZ
PRINTER: DP-730 (Dot printer) for ER-A440
PR-45M (Thermal printer) for ER-A450

CONTENTS

SHARP CORPORATION

CHAPTER 1. SERVICE (SRV) MODE

The SRV key is used for operating in the SRV mode.

1. SRV. reset (Program Loop Reset)

Used to return the machine back to its operational state after a lock-up has occurred.

Procedure

- Method 1

  1) Turn off the AC switch.

  2) Set the mode switch to (SRV′) position.

  3) Turn on the AC switch.

  4) Turn to (SRV) position from (SRV′) position.

- Method 2

  1) Set the mode switch to PGM2 position.

  2) Turn off the AC switch.

  3) While holding down JOURNAL FEED key and RECEIPT FEED key, turn on the AC switch.

Note: When disassembling and reassembling always power up using method 1 only. Method 2 will not reset the CKDC8.

Note: SRV programming job#926-B must be set to "4" to allow PGM program loop reset.

PRG. RESET ✱✱✱

2. Master reset (All memory clear)

There are two possible methods to perform a master reset.

- MRS-1

Used to clear all memory contents and return machine back to its initial settings. return keyboard back to default. for default keyboard layout.

Procedure

1) Turn off the AC switch.

2) Set the MODE switch to the (SRV′) position.

3) Turn on the AC switch.

4) While holding down JOURNAL FEED key, turn to (SRV) position from (SRV′) position.

- MRS-2

  Used to clear all memory and keyboard contents.
  This reset returns all programming back to defaults. The keyboard must be entered by hand.
  This reset is used if an application needs different keyboard layout other than that supplied by a normal MRS-1.

Procedure

1) Turn off the AC switch.

2) Set the MODE switch to the (SRV′) position.

3) Turn on the AC switch.

4) While holding down JOURNAL FEED key and RECEIPT FEED key, turn to (SRV) position from (SRV′) position.

5) Key position assignment:

✱ After the execution of MRS-2, only the RECEIPT FEED and JOURNAL FEED keys can remain effective on key assignment. Any key can be assigned on any key position on the main keyboard.

[key setup procedure]

MRS-2 executed → 0 → Key position set → Free key *2 → Free key setup complete.
→ 0 *1
Disable
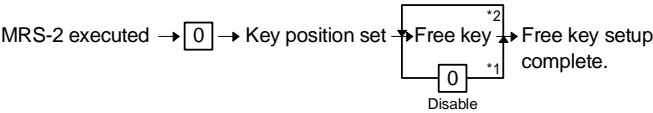
MASTER RESET ✱✱✱

NOTES:

✱1: When the 0 key is pressed, the key of the key number on display is disabled.

✱2: Push the key on the position to be assigned. With this, the key of the key number on display is assigned to that key position.

Key number	Key name	Key number	Key name
1	Numeric key "0"	9	Numeric key "8"
2	Numeric key "1"	10	Numeric key "9"
3	Numeric key "2"	11	Numeric key "00"
4	Numeric key "3"	13	Decimal point key
5	Numeric key "4"	14	CL key
6	Numeric key "5"	15	⊗ key
7	Numeric key "6"	16	ST key
8	Numeric key "7"	17	TL key

3. Reading of the SRV mode program

List of program reports

JOB#	Report name
900	SRV-mode program full item report (not incl. keyboard layout)
950	Keyboard layout report (on keys other than dept. keys and direct PLU keys)
951	Keyboard layout report (on dept. keys and direct PLU keys)
970	SRV file programming report

[JOB# 900]

Reading the contents of the SRV mode programming

Key operation.

900 → ⊗ → TL

```
    YOUR RECEIPT
     THANK YOU

  01/01/00  0:02
  000000  #0004

  #900

   901#        0102
   902#        0000
   903#        4000
   904#        0000
   905#        0100
   906#        0001
   907#        0014
   908#        0000
   909#        2001
   910#        0204
   911#        0000
   912#        1141
   913#        0002
   914#        0100
   915#        0020
   916#        1000
   917#        0000
   918#        0000
   919#        0000
   920#        0000
   921#        0000
   922#        0000
   923#        0000
   924#        0000
   925#        0000
   926#        0400
   927#        0000
   928#        0000
   929#        0000
   980#        0000
   930#          Z1  0000
   932#          Z1  0000
   933#          Z1  0000
   934#          Z1  0000
   935#          Z1  0000
   937#          Z2  0000
   939#          Z2  0000

   942#
   GT2    *00000000000.00
   943#
   GT3    *00000000000.00

   944#       0000
   948#             00
   949#       TRAINING
   986#              *
   987#       0
```

— Header graphical logo(Default:
　　Graphical LOGO only)

— Date/Time
— Machine No./Consective No.

— JOB#

— JOB#//Programming
　data(ABCD)

For ER-A440:
(Default: 3 line header)

```
      SHARP
  PRESENTS THE
   ER-A440
```

— General Z1 reset counter
— Clerk Z1 reset counter
— Hourly Z1 counter
— PLU Z1/Z2 reset counter
— Cashier Z1 reset counter
— General Z2 reset counter
— Daily net Z2 reset counter

— GT2 counter

— GT3 counter

— Secret code for PGM2 mode
— Training cashier No.
— Training mode title
— Domestic currency symbol
— Initial text mode programming

[JOB# 950]

Reading the contents of the SRV mode programming for FREE KEY LAYOUT setting. (Function Key)

Key operation

950 → ⊗ → TL

```
    YOUR RECEIPT
     THANK YOU

  01/01/00  0:03
  000000  #0006

  #950

  001   0  KEY     017
  002   1  KEY     018
  003   2  KEY     022
  004   3  KEY     026
  005   4  KEY     019
  006   5  KEY     023
  007   6  KEY     027
  008   7  KEY     020
  009   8  KEY     024
  010   9  KEY     028
  011  00 KEY      021
  012  000KEY      ---
  013   .  KEY     025
  014  CLEAR       016
  015     X        015
  016  SBTL        064
  017  TOTAL       063
  018  #           012
  019  NS          011
  020  PLU         044
  021  GCCOPY      ---
  023  RCPT        003
  024  VOID        009
  025  RFND        005
  026  %1          002
  027  %2          001
  028  %3          ---
  029  %4          ---
  030  (-)1        007
  031  (-)2        ---
  032  (-)3        ---
  033  (-)4        ---
  034  VAT         056
  035  AUTO        014
  036  AUTO2       013
  037  AUTO3       ---
  038  AUTO4       ---
  039  AUTO5       ---
  040  AUTO6       ---
  041  AUTO7       ---
  042  AUTO8       ---
  043  AUTO9       ---
  044  AUTO10      ---
  045  CA2         ---
  046  CHECK       059
  047  CHECK2      065
  048  CHECK3      ---
  049  CHECK4      ---
```

— Header graphical logo

— Date/Time
— Machine No./Consective No.

— JOB#

— Key No./Key label name/
　Location No.

— Key No./Key label name/
　Location No.(---:Not used)

```
  021    GCCOPY      ---
  022    VP          ---
  023    RCPT        003
```

050	CR1	060
051	CR2	066
052	CR3	067
053	CR4	---
054	EX 1	062
055	EX 2	061
056	EX 3	---
057	EX 4	---
058	RA	010
059	RA 2	---
060	PO	006
061	PO 2	---
062	1/2KEY	---
063	AMT	050
064	VAT SF	---
065	DIF ST	---
066	CASH#	068
067	CLK#	---

[JOB# 951]

Reading the contents of the SRV mode programming for FREE KEY LAYOUT setting. (Dept. & PLU key)

Key operation

951 → $\boxtimes$ → TL

```
    YOUR RECEIPT
    THANK YOU

01/01/00  0:04
000000 #0007

#951

 001   001      033
 002   002      034
 003   003      035
 004   004      036
 005   005      037
 006   006      039
 007   007      040
 008   008      041
 009   009      042
 010   010      043
 011   011      045
 012   012      046
 013   013      047
 014   014      048
 015   015      049
 016   016      051
 017   017      052
 018   018      053
 019   019      054
 020   020      055
 021   021      ---
 022   022      ---
 023   023      ---
```

- — Header graphical logo
- — Date/Time
- — Machine No./Consective No.
- — JOB#
- — Key No./Key label name/ Location No.
- — Key No./Key label name/ Location No.(---:Not used)

```
 024   024      ---
 025   025      ---
 026   026      ---
 027   027      ---
 028   028      ---
 029   029      ---
 030   030      ---
 031   031      ---
 032   032      ---
 033   033      ---
 034   034      ---
 035   035      ---
 036   036      ---
 037   037      ---
 038   038      ---
 039   039      ---
 040   040      ---
 041   041      ---
 042   042      ---
 043   043      ---
 044   044      ---
 045   045      ---
 046   046      ---
 047   047      ---
 048   048      ---
 049   049      ---
 050   050      ---
 051   051      ---
```

[JOB#970]

Reading the contents of the SRV mode programming for FILE setting.

Key operation

970 → ⊗ → TL

```
YOUR RECEIPT ───── Header graphical logo
THANK YOU

01/01/00  0:05 ───── Date/Time
000000 #0009 ───── Machine No./Consective No.

#970 ───── JOB#

*001*  00020      /00020 ───── File table No./No.of records/
*002*  00020      /00020       No.of used records
*004*  00020      /00020
*006*  00020      /00020
*007*  00020      /00020
*008*  01000      /00020
*009*  01000      /00020
*011*  01000      /00020
*013*  01000      /00020
*016*  00076      /00076
*017*  00076      /00076
*018*  00076      /00076
*019*  00004      /00004
*020*  00004      /00004
*021*  00004      /00004
*022*  00041   004/00041 ───── File table No./No.of records/
*023*  00041   004/00041       No.of blocks/No.of used records
*024*  00041   004/00041
*025*  00041      /00041
*026*  00041      /00041
*027*  00041      /00041
*028*  00041      /00041
*039*  00048      /00048
*040*  00048      /00048
*041*  00032      /00000
*042*  00032      /00000
*043*  00080      /00080

  1E4000 ───── File memory start address
  1EF136 ───── Empty memory start address
  1FFFFF ───── Memory end address
```

For ER-A440:

```
  1F4000
  1FF136
  27FFFF
```

[JOB#990]

Reading the contents of the SRV mode programming for SSP setting.

Key operation

990 → ⊗ → TL

```
YOUR RECEIPT ───── Header graphical logo
THANK YOU

01/01/00  0:06 ───── Date/Time
000000 #0012 ───── Machine No./Consective No.

#990 ───── JOB#

SSP ERA450V   - 001 ───── SSP No.
    001           001 ───── Step No./SSP data
    002           002
    003           003
    004           004
    005           005
    006           006
    007           007
    008           008
    009           009
    010           010
    011           011
    012           012
    013           013
    014           014
    015           015
    016           016
CHECK SUM ERROR ───── Error message
```

For ER-A440:

```
SSP ERA440V   - 001
    001           001
    002           002
```

4. Service mode programming

The following are the key operation required for programming.

$$XXX \rightarrow \boxed{\cdot} \rightarrow \boxed{\otimes} \xrightarrow{0} [A]\ [B]\ [C]\ [D] \rightarrow \boxed{TL}$$

(Job#)   Numeric entry
4 digits max
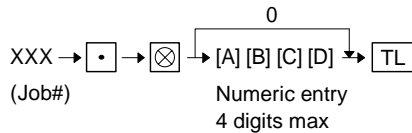
Details of [A][B][C][D] will be discussed at each item description.

★ mark is MRS setting.

[JOB#901] ER-A440: MRS=0102
ER-A450: MRS=0102

#901-A: 1. EFT easy card

1.EFT easy card	901-A	
No	0	★
Yes	2	

#901-B: Tax system

1. TAX system	901-B	
Auto TAX 1~6	0	
Auto VAT 1~6	1	★
Manual VAT 1~6	2	
Manual VAT 1	3	
Manual TAX 1~6	4	
Auto VAT 1~3 and Auto TAX 4~6	5	

#901-C: 1. Rounding system

1. Rounding system	901-C	
Normal	0	★
SWEDEN	1	
DENMARK	4	

#901-D: 1. TAB setting

1. TAB setting	901-D	
0	0	
0.0	1	
0.00	2	★
0.000	3	

[JOB#902] ER-A440: MRS=0000
ER-A450: MRS=0000

#902-A, B, C: Not used (Fixed at "000")

#902-D: 1. EFT terminal

1. EFT terminal	902-D	
No	0	★
Yes	4	

[JOB#903] ER-A440: MRS=4000
ER-A450: MRS=4000

#903-A: 1. ECR data copy baud rate

1. Baud rate (bps)	903-A	
2400	2	
4800	3	
9600	4	★
19200	5	
38400	6	

#903-B, C, D: Not used (Fixed at "000")

[JOB#904] ER-A440: MRS=0000
ER-A450: MRS=0000

#904-A: 1. Printing of date

1. Printing of date	904-A	
Yes	0	★
No	4	

#904-B: 1. Printing of consecutive No.

1. Printing of consecutive No.	904-B	
Yes	0	★
No	4	

#904-C, D: Not used (Fixed at "00")

[JOB#905] ER-A440: MRS=0100
ER-A450: MRS=0100

#905-A: Not used (Fixed at "0")

#905-B: 1. Tax printing when taxable subtotal is zero.
          2. Tax printing when tax is zero.

1. Taxable subtotal is zero	2. Tax is zero	905-B	
Skip	Print	0	
	Skip	1	★
Print	Print	4	
	Skip	5	

#905-C: 1. Printing of rounding amount in receipt. (For Australia)
          2. Printing format for split pricing entry. (For Australia)

1. Printing of rounding amount in receipt	2. Printing format for split pricing entry	905-C	
No	Normal format	0	★
	Australia format	1	
Yes	Normal format	2	
	Australia format	3	

#905-D : Not used (Fixed at "0")

[JOB#906] ER-A440: MRS=0001
ER-A450: MRS=0001

#906-A: 1. Print Dept. and PLU number on receipt.

1. Print Dept. and PLU number on receipt.	906-A	
No	0	★
Yes	4	

#906-B: 1. Bottle return function
          2. Hash department setting

1. Bottle return function	2. Hash department setting	906-B	
Disable	Disable	0	★
	Enable	2	
Enable	Disable	4	
	Enable	6	

#906-C: 1. Split pricing counting
2. Multiplication entry

1. Split pricing counting	2. Multiplication entry	906-C	
Quantity	Multiplication	0	★
	Successive multiplication	1	
	Split pricing	2	
Package	Multiplication	4	
	Successive multiplication	5	
	Split pricing	6	

#906-D: 1. Presetting consecutive No.
2. Fractional quantity

1. Presetting consecutive No.	2. Fractional quantity	906-D	
Yes	No	0	
	Yes (3 digit decimal place)	1	★
No	No	2	
	Yes (3 digit decimal place)	3	

[JOB#907] ER-A440: MRS=0014
ER-A450: MRS=0014

#907-A, B: Not used (Fixed at "00")

#907-C: 1. In case of all cashier CCD and individual cashier CCD, X report before CCD entry

2. Locking of REG mode entry after individual cashier re-setting

3. Minus department and PLU

1. In case of all cashier CCD and individual cashier CCD, X report before CCD entry	2. Locking of REG mode entry after individual cashier resetting	3. Minus department and PLU	907-C	
Disable	Disable	Disable	0	
		Enable	1	★
	Enable	Disable	2	
		Enable	3	
Enable	Disable	Disable	4	
		Enable	5	
	Enable	Disable	6	
		Enable	7	

#907-D: 1. Z-counter print for PLU, Hourly, Cashier, Clerk, Daily net

2. CCD compulsory

1. Z-counter print	2. CCD compulsory	907-D	
Yes	Non compulsory	0	
	For individual cashier	1	
	For all cashier	2	
No	Non compulsory	4	★
	For individual cashier	5	
	For all cashier	6	

[JOB#908] ER-A440: MRS=0000

ER-A450: MRS=0000

#908-A: GT print on Z report

GT1 (NET)	GT2 (+)	GT3 (–)	908-A	
Print	Print	Print	0	★
		Skip	1	
	Skip	Print	2	
		Skip	3	
Skip	Print	Print	4	
		Skip	5	
	Skip	Print	6	
		Skip	7	

#908-B: GT print on X report

GT1 (NET)	GT2 (+)	GT3 (–)	908-B	
Skip	Skip	Skip	0	★
		Print	1	
	Print	Skip	2	
		Print	3	
Print	Skip	Skip	4	
		Print	5	
	Print	Skip	6	
		Print	7	

#908-C: 1. Add void-mode transaction data to hourly total report
2. X1/Z1 report in X2/Z2 mode
3. Resetting of consecutive number in Z1 resetting

1. Add void-mode transaction to hourly total report	2. X1/Z1 report in X2/Z2 mode	3. Resetting of consecutive No. in Z1 resetting	908-C	
No	Enable	No	0	★
		Yes	1	
	Disable	No	2	
		Yes	3	
Yes	Enable	No	4	
		Yes	5	
	Disable	No	6	
		Yes	7	

#908-D: 1. Printing X/Z report Journal only/Receipt & Journal (Except the individual cashier and individual clerk report)

2. Z1 resetting, resets GT Enable/Disable

1. Printing X/Z report	2. GT resetting at Z1	908-D	
Receipt & Journal	Disable	0	★
	Enable	1	
Journal	Disable	4	
	Enable	5	

[JOB#909] ER-A440: MRS=2001
ER-A450: MRS=2001

#909-A: 1. Printing of Training GT on the X report

2. Printing of Training GT on the Z report

1. Printing of Training GT on the X report	2. Printing of Training GT on the Z report	909-A	
Skip	Print	0	★
	Skip	1	
Print	Print	2	
	Skip	3	

#909-B: 1. Printing of data on PLU resetting report

2. All Z1 resetting in X1/Z1 mode

1. Printing of data on PLU resetting report	2. All Z1 resetting in X1/Z1 mode	909-B	
Print	Enable	0	★
	Disable	2	
Skip	Enable	4	
	Disable	6	

#909-C: 1. Printing of data in void mode totalizer and manager void totalizer on Z2 report

2. Printing of data in void mode totalizer and manager void totalizer on Z1 report

2. Printing of data in void mode totalizer and manager void totalizer on Z2 report	3. Printing of data in void mode totalizer and manager void totalizer on Z1 report	909-C	
Print	Print	0	★
	Skip	2	
Skip	Print	4	
	Skip	6	

#909-D: 1. Clerk change during entry operation

2. Entry of clerk code compulsory

3. When real cashier key is taken out

1. Clerk change during entry operation	2. Entry of clerk code compulsory	3. When real cashier key is taken out	909-D	
Disable	No (After clerk Z1 only)	Transaction in progress	0	
		Transaction finalized	1	★
	Yes (Everytime)	Transaction in progress	2	
		Transaction finalized	3	
Enable	No (After clerk Z1 only)	Transaction in progress	4	
		Transaction finalized	5	
	Yes (Everytime)	Transaction in progress	6	
		Transaction finalized	7	

[JOB#910] ER-A440: MRS=0204
ER-A450: MRS=0204

#910-A: 1. Clerk name print on receipt when clerk is changed. (It is always print on Journal)

2. Overlaped cashier function. (This selection is available only for "Cashier only" system)

1. Clerk name print on receipt when clerk is changed.	2. Overlaped cashier function	910-A	
No	No	0	★
	Yes	1	
Yes	No	4	
	Yes	5	

#910-B: 1. Cashier/Clerk code display and print.

2. Auto cashier sign off at the end of transaction

1. Cashier/Clerk code display and print.	2. Auto cashier sign off at the end of transaction	910-B	
Hidden	No (After cashier Z1 only)	0	
	Yes (Everytime)	1	
Appear	No (After cashier Z1 only)	2	★
	Yes (Everytime)	3	

#910-C: Not used (Fixed at "0")

#910-D: 1. Cashier system

1. Cashier system	910-D	
One hole	1	
Cashier code entry	4	★

[JOB#911] ER-A440: MRS=0000
ER-A450: MRS=0000

#911-A: 1. Fraction treatment

1. Fraction treatment	911-A	
Round off	0	★
Round up	1	
Round down	2	

#911-B, C, D: Not used (Fixed at "000")

[JOB#912] ER-A440: MRS=1140
ER-A440: MRS=1141

#912-A: 1. Date print format

Date format	912-A	
Month/Day/Year	0	
Day/Month/Year	1	★
Year/Month/Day	2	

#912-B: 1. Time system

1. Time system	912-B	
12H	0	
24H	1	★

#912-C: 1. After transaction receipt format

2. Copy receipt

3. Footer print control

1. After transaction receipt	2. Copy receipt	3. Footer print control	912-C	
Total only	No	All receipt	0	
		On selected function keys at the time of finalization	1	
	Yes	All receipt	2	
		On selected function keys at the time of finalization	3	
Detail	No	All receipt	4	★
		On selected function keys at the time of finalization	5	
	Yes	All receipt	6	
		On selected function keys at the time of finalization	7	

#912-D: (ER-A440: No STAMP function)   1. Message control.

1. Message control	912-D	
3-line header	0	★
6-line header	3	
3-line header and 3-line footer	5	

∗

| Type : | 0 | 3 | 5 |
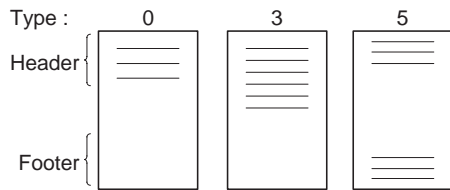
Header

Footer
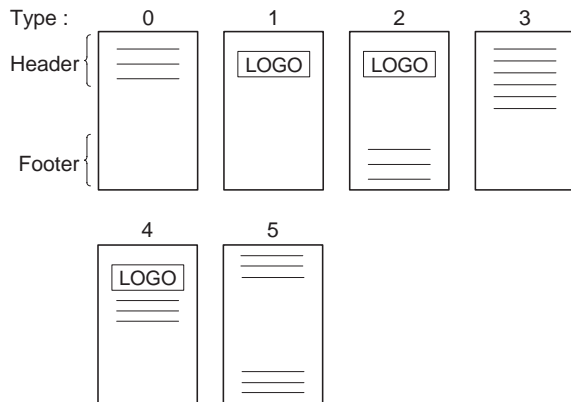
#912-D: (ER-A450)   1. LOGO Message control.

1. LOGO Message control	912-D	
3-line header instead of a LOGO	0	
Glaphical LOGO only	1	★
Glaphical LOGO and 3-line footer	2	
6-line header	3	
Glaphical LOGO and 3-line header	4	
3-line header and 3-line footer	5	

| Type : | 0 | 1 | 2 | 3 |

Header

Footer

| 4 | 5 |

[JOB#913] ER-A440: MRS = 0002
ER-A450: MRS = 0002

#913-A (ER-A440):   1.   Validation Print format on Receipt/Journal

2.   Content of total VP amount

1. Validation Print format on Receipt/Jaurnal	2. Content of total VP amount	913-A	
DATA & AMOUNT	Total amount	0	★
	Tendered amount	1	
MACHINE No. & AMOUNT	Total amount	2	
	Tendered amount	3	

#913-A (ER-A450):   Not used (Fixed at "0")

#913-B (ER-A440): 1.   Printing of subtotal

2.   Escape the compulsory of VP

∗ $\boxed{\bullet}$, $\boxed{\text{RCPT}}$ keys to escape validation (MGR mode).

1. Printing of subtotal	2. Escape the compulsory of VP	913-B	
No	Disable	0	★
	Enable	1	
Yes	Disable	4	
	Enable	5	

#913-B (ER-A450): 1.   Printing of subtotal

1. Printing of subtotal	913-B	
No	0	★
Yes	4	

#913-C: 1.   Buzzer off 2 sec. after lock error

2.   Buffered keyboard

1. Buzzer off 2 sec. after lock error	2. Buffered keyboard	913-C	
2-sec. off	Yes	0	★
	No	1	
Constant	Yes	2	
	No	3	

#913-D: 1.   Drawer closing compulsory

2.   Error mode

3.   Key catch sound

1. Drawer closing compulsory	2. Error mode	3. Key catch sound	913-D	
Non-compulsory	All lock error	Enable	0	
		Disable	1	
	Mis operation (One shot error)	Enable	2	★
		Disable	3	
Compulsory	All lock error	Enable	4	
		Disable	5	
	Mis operation (One shot error)	Enable	6	
		Disable	7	

[JOB#914] ER-A440: MRS = 0100
ER-A450: MRS = 0100

#914-A: 1.   Receipt issuing at no-sale

2. $\boxed{\text{NS}}$ key separation from $\boxed{\text{TL}}$ key for no sale function

1. Receipt issuing at no-sale	2. [NS] key separation	914-A	
Enable	Yes	0	★
	No	2	
Disable	Yes	4	
	No	6	

#914-B: 1.   No-sale after NON ADD code entry

1. No-sale after # entry	914-B	
Disable	0	
Enable	1	★

#914-C 1. Action to be taken when the machine is locked by the Receipt/Journal paper near end check

    2. Void mode

1. Action to be taken when the machine is locked by the Receipt/Journal paper near end check	2. Void mode	914-C	
Unlocked by CL key	Enable	0	★
	Disable	2	
Enforcing of paper roll replacement	Enable	4	
	Disable	6	

#914-D: 1. CHECK CASHING Enable/Disable

1. CHECK CASHING	914-D	
Disable	0	★
Enable	2	

[JOB#915] ER-A440: MRS = 0020
ER-A450: MRS = 0020

#915-A, B: Not used (Fixed at "00")

#915-C: 1. Paper near end check

    2. ST (–), ST (%) as many times needed/operation only once

1. Paper near end check	2. ST (–), ST (%) as many times needed/ operation only once	915-C	
Yes	Unlimited	0	
	Once only	2	★
No	Unlimited	4	
	Once only	6	

[JOB#916] ER-A440: MRS = 1000
ER-A450: MRS = 1000

#916-A: 1. Print format when text and amount overlaps each other REG mode

1. Print format when text and amount overlaps each other REG mode	916-A	
Truncate text	0	
2 line print	1	★

#916-B: 1. Finalization by charge (credit) when ST ≦ 0

    2. Tendering which is smaller than the sales amount

1. Finalization by charge (credit) when ST ≦ 0	2. Tendering which is smaller than the sales amount	916-B	
Disable	Enable	0	★
	Disable	2	
Enable	Enable	4	
	Disable	6	

#916-C: 1. Negative merchandise subtotal
    2. Subtotal entry compulsory before tendering
    3. Subtotal entry before direct non-tendering finalization

1. Negative merchandise subtotal	2. Subtotal entry compulsory before tendering	3 .Subtotal entry before direct non-tendering finalization	916-C	
Allow	Noncompulsory	Non-compulsory	0	★
		Compulsory	1	
	Compulsory	Non-compulsory	2	
		Compulsory	3	
Disallow	Non-compulsory	Non-compulsory	4	
		Compulsory	5	
	Compulsory	Non-compulsory	6	
		Compulsory	7	

#916-D: 1. Coupon PLU printing on X/Z report
    2. Net sales subtotal (NET1) printing on X/Z report
    3. CHECK change total printing on X/Z report

1. Print coupon PLU's on general report	2. Print net sales SBTL (NET1) on general report	3. Print CHK CHANGE on general report	916-D	
Print	Print	Print	0	★
		Skip	1	
	Skip	Print	2	
		Skip	3	
Skip	Print	Print	4	
		Skip	5	
	Skip	Print	6	
		Skip	7	

[JOB#917] NOT USED: ER-A440: MRS = 0000
ER-A450: MRS = 0000

[JOB#918] ER-A440: MRS = 0000
ER-A450: MRS = 0000

#918-A: 1. Direct non-tendering finalization after previous tender entry

1. Direct non-tendering finalization after previous tender entry	918-A	
Disable	0	★
Enable	2	

#918-B: Not used (Fixed at "0")

#918-C: 1. Printing of Z1/Z2 counter in Z reports

1. Printing of Z1/Z2 counter in Z reports	918-C	
Yes	0	★
No	4	

#918-D: Not used (Fixed at "0")

[JOB#919] ER-A440: MRS = 4000
ER-A450: MRS = 4000

#919-A, B Not used (Fixed at "00")

#919-C: 1. Amount printing when PLU unit price is 0

1. Amount printing when PLU unit price is 0	919-C	
No	0	★
Yes	1	

919-D: 1. Conversion ST printing of native ST

1. Conversion SBTL print of native SBTL	919-D
Yes	0	★
No	4

[JOB#920] NOT USED ER-A440: MRS = 0000
ER-A450: MRS = 0000

[JOB#921] NOT USED ER-A440: MRS = 0000
ER-A450: MRS = 0000

[JOB#922] NOT USED ER-A440: MRS = 0000
ER-A450: MRS = 0000

[JOB#923] NOT USED ER-A440: MRS = 0000
ER-A450: MRS = 0000

[JOB#924] NOT USED ER-A440: MRS = 0000
ER-A450: MRS = 0000

[JOB#925] NOT USED ER-A440: MRS = 0000
ER-A450: MRS = 0000

[JOB#926] ER-A440: MRS = 0400
ER-A440: MRS = 0400

#926-A: Not used (Fixed at "0")

#926-B: 1. Program reset at PGM2 mode

1. Program reset at PGM2 mode	926-B
Disable	0
Enable	4	★

#926-C, D: Not used (Fixed at "00")

[JOB#927] ER-A440: MRS = 0000
ER-A450: MRS = 0000

#927-A: 1. Rounding up of the units digit of amount

#927-B: 1. Rounding down of the units digit of amount

1. Rounding the units digit of amount	927-AB
Common destination	00	★
Netherland/Switzerland	82
Norway	54

#927-C: 1. Difference memory (Difference between before-rounding and after-rounding)

2. Limit on the least sighificant digit in entering the amount on item

1. Difference memory	2. Limit on the least significant digit in entering the amount on item	927-C
No	Arbitary	0	★
	0 only	1
	0 and 5 only	2
Yes	Arbitary	4
	0 only	5
	0 and 5 only	6

#927-D: 1. Application of rounding

2. Limit on the least significant digit in entering the amount of payment

1. Application of rounding	2. Limit on the least significant digit in entering the amount of payment	927-D
Item & Payment	Arbitary	0	★
	0 only	1
	0 and 5 only	2
Payment	Arbitary	4
	0 only	5
	0 and 5 only	6

[JOB#928] NOT USED: ER-A440: MRS = 0000
ER-A450: MRS = 0000

[JOB#929] NOT USED: ER-A440: MRS = 0000
ER-A450: MRS = 0000

#929-A: Not Used (Fixed At "0")

#929-B: 1. Message LOGO print on Journal

1. Message LOGO print on Journal	929-B
No	0	★
Yes	2

#929-C: Not used (Fixed at "0")

#929-D: Taxable status of PLU which is set at "Non-taxable" by PGM.

1. Taxable status of PLU which is set at "Non-taxable" by PGM.	929-D
According to its associated department	0	★
Non taxable	2

[JOB#980] ER-A440: MRS = 0000
ER-A450: MRS = 0000

#918-A: Not used (Fixed at "0")

#980-B: 1. Total amount rounding when a transaction is finalized directly by CHECK or CREDIT key (For Australia)

∗ This selection is not effective at Manual Tax 1-6 system.

1. Total amount rounding	980-B
Yes (Rounding)	0	★
No (Not rounding)	2

#980-C: Not used (Fixed at "0")
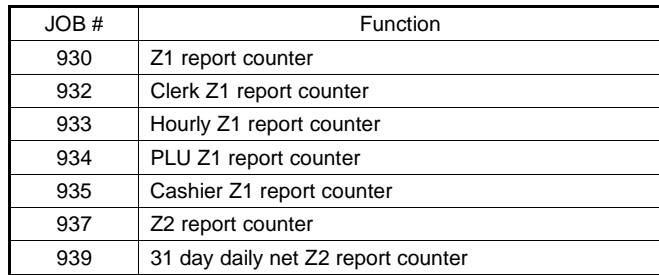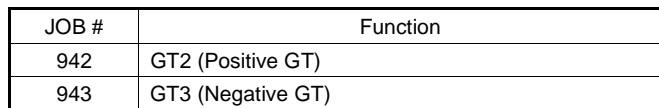
#980-D: 1. VAT/TAX assignment print

1. VAT/TAX assignment print	980-D
Print	0	★
Not	2

[JOB#930~939] ER-A440: MRS = 0000
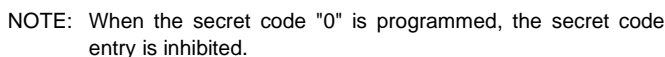### ER-A450: MRS = 0000

RESET REPORT COUNTER

```
                          "0000"
                        ┌────────┐
Job# → • → ⊗ ├→ ABCD ─┤→ TL
                        └──── Initial value of Z countr
```

JOB #	Function
930	Z1 report counter
932	Clerk Z1 report counter
933	Hourly Z1 report counter
934	PLU Z1 report counter
935	Cashier Z1 report counter
937	Z2 report counter
939	31 day daily net Z2 report counter

[JOB#942, 943] ER-A440: MRS = 0000000000000
ER-A450: MRS = 0000000000000

GT COUNTER PRESETTING

```
                       0
                 ┌───────────┐
Job# → • → ⊗ ├→ 0000000000000 →│ TL
                 └───────────┘
                   13 digits
```

JOB #	Function
942	GT2 (Positive GT)
943	GT3 (Negative GT)

Note: GT1 is obtained by calculation
Equation: GT1=GT2-GT3

[JOB#944] ER-A440: MRS = 0000
ER-A450: MRS = 0000

PGM1/2 secret code presetting

```
                    0
              ┌─────────┐
944 → • → ⊗ ├→ XXXX ┤→ TL
              └─────────┘
                4 digits
```

NOTE: When the secret code "0" is programmed, the secret code
       entry is inhibited.

[JOB#948] ER-A440: MRS = 00
ER-A450: MRS = 00

PROGRAMMING OF TRAINING CASHIER NO.

```
                   0
             ┌─────────┐
948 → • → ⊗ ├→ XX ┤→ TL
             └─────────┘
```
XX: Cashier No.

[JOB#949] ER-A440: MRS = "TRAINING"
ER-A450: MRS = "TRAINING"

THE TRAINING MODE'S TITLE

```
                      Space
              ┌─────────────┐
949 → • → ⊗ ├→ Character Key ┤→ TL
              └ (8 chara.) ──┘
```

Characters can be entered by using character keys or numeric keys.

Please refer to section 4.

[JOB#986] ER-A440: MRS = "   ∗"
ER-A450: MRS = "   ∗"

Domestic currency symbol programming

```
                      Space
              ┌─────────────┐
986 → • → ⊗ ├→ Character Key ┤→ TL
              └ (4 chara.) ──┘
```

Characters can be entered by using character keys or numeric keys.

Please refer to section 4.
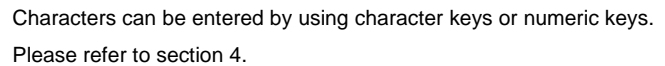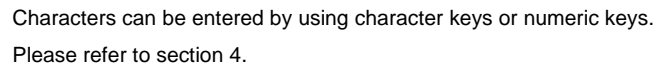
This symbol is printed with (+) amount of domestic currency. The
programmed characters is printed at left side of amout.

Ex) Case of "DM":
     | DEPT.01 DM 1.00|
                 │
                 └── Programmed symbol

If some space characters are programmed at the left side of symbol
(like "   ∗"), they are not counted as the number of character of the
currency symbol. (In case of "   DM", the number of character is 2.)

Ex) Case of "   DM": (The currency symbol means "DM")

     | DEPARTMENT01 DM 10.00|
                      │
                      └── Programmed symbol

[JOB#987] ER-A440: MRS = 0
ER-A450: MRS = 0

Text Changing (To Default text)

```
                   0
             ┌─────────┐
987 → • → ⊗ ├→ X ┤→ TL
             └─────────┘
```

X: 0 = English text
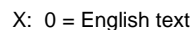
    1 = Germen text

When this job is executed, below texts are set as default data.
(a) Function text
(b) Each message text (LOGO, etc..)

[JOB#989]

RESETTING OF ALL COUNTER AND TOTALIZER

```
989 → • → ⊗ → TL
```

∗ All counter, totalizer, all GTs, and all Z counter are reset.

[JOB#950] MRS = STANDARD KEY LAYOUT

Free key layout (Except for department keys and direct PLU keys.)

[JOB#951] MRS = STANDARD KEY LAYOUT

Free key layout (department keys and direct PLU keys)

- Programming of the keys to be dept keys or direct PLU keys on the keyboard.
- Key No. is assigned to each key which is supposed to be dept. Key or direct PLU key by depressing the key after entering the key No.
- Those keys programmed by this job No. will be dept. keys if dept. code is assigned, and will be direct PLU keys if PLU code is assigned in the PGM2 mode.

FUNCTION KEY LIST

Key No.	KEY	KEY TEXT
1	0 KEY	0 KEY
2	1 KEY	1 KEY
3	2 KEY	2 KEY
4	3 KEY	3 KEY
5	4 KEY	4 KEY
6	5 KEY	5 KEY
7	6 KEY	6 KEY
8	7 KEY	7 KEY
9	8 KEY	8 KEY
10	9 KEY	9 KEY
11	00 KEY	00 KEY
12	000 KEY	000KEY
13	DECIMAL POINT	. KEY
14	CLEAR	CLEAR
15	⊗	X
16	SUB TOTAL	SBTL
17	TOTAL	TOTAL
18	#	#
19	NO SALE	NS
20	PLU	PLU
21	G. C. COPY	GCCOPY
22	PRINT (only ER-A440)	VP
23	RCPT	RCPT
24	VOID	VOID
25	REFUND	RFND

Key No.	KEY	KEY TEXT
26	%1	%1
27	%2	%2
28	%3	%3
29	%4	%4
30	(–)1	(–)1
31	(–)2	(–)2
32	(–)3	(–)3
33	(–)4	(–)4
34	VAT	VAT
35	AUTO	AUTO
36	AUTO2	AUTO2
37	AUTO3	AUTO3
38	AUTO4	AUTO4
39	AUTO5	AUTO5
40	AUTO6	AUTO6
41	AUTO7	AUTO7
42	AUTO8	AUTO8
43	AUTO9	AUTO9
44	AUTO10	AUTO10
45	CASH2	CA2
46	CHECK	CHECK
47	CHECK2	CHECK2
48	CHECK3	CHECK3
49	CHECK4	CHECK4
50	CREDIT1	CR1
51	CREDIT2	CR2
52	CREDIT3	CR3
53	CREDIT4	CR4
54	EX1	EX 1
55	EX2	EX 2
56	EX3	EX 3
57	EX4	EX 4
58	RA	RA
59	RA2	RA2
60	PO	PO
61	PO2	PO2
62	½	1/2 KEY
63	AMT	AMT
64	VAT SHIFT	VAT SF
65	DIFFER ST	DIF ST
66	CASHIER NO.	CASH #
67	CLERK NO.	CLK #
999	INHIBIT	

ER-A440/A450 KEY POSITION

☐ :FIXED KEY (NOT TO CHANGE)

[JOB#971]

SRV FILE PROGRAMMING. (File creation/deletion and change of record count or block count)

Key operation

```
                          Delete
                        ┌──────────┐
971 → • → ⊗ → abc → ⊗ ─┴→ XXXXX ──┴→ TL
      File group No.   Number of records
```
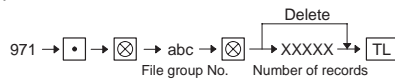
Group No.	File name	Type	✱ File table No. (Create/Erase)
1	Dept.	1	1, 2, 4, 6
2	Dept Text (8chra.)	0	3
3	Dept Text (12chra.)	0	4
4	Department Text (16chra.)	0	5
5	PLU	1	8, 9, 11, 13
6	PLU Text (8chra.)	0	10
7	PLU Text (12chra.)	0	11
8	PLU Text (16chra.)	0	12
9	Link PLU	1	15
10	Cashier	1	19, 20, 21, 22, 23
11	Clerk	1	29, 30, 31, 32, 33, 35, 36, 37, 38
12	Hourly	1	39, 40
13	Daily net	1	41, 42
14	Reg. buffer	1	43
15	Overlapped Cashier	0	44
16	Term Dept.	0	7
17	Term PLU	0	14
18	Term Transaction	0	18
19	Term Cashier transaction	0	24
20	Term Clerk Trans.	0	34
21	All of term files	0	7, 14, 18, 24, 34

Type = 0 ; Create/Erase only

Type = 1 ; Create/Erase and Increase/decrease the number of Records or blocks.

✱ : The files which are created or erased by the entry of group No.

File table

Table No.	File name		RECORD			BLOCK			Label size	Data size
			MRS	Max.	#1	MRS	Max.	#2		
1	Dept.	PRESET	20	50		1	1		1	6
2		PRICE	20	50	(1)	1	1		0	3
3		TEXT (8chra.)	0	50	(1)	0	1		0	8
4		TEXT (12chara.)	20	50	(1)	1	1		0	12
5		TEXT (16chara.)	0	50	(1)	0	1		0	16
6		DAILY	20	50	(1)	1	1		0	9
7		TERM	20	50	(1)	1	1		0	9
8	PLU	PRESET	1000	✱✱✱		1	1		5	6
9		PRICE	1000	✱✱✱	(8)	1	1		0	3
10		TEXT (8chra.)	0	✱✱✱	(8)	0	1		0	8
11		TEXT (12chra.)	1000	✱✱✱	(8)	1	1		0	12
12		TEXT (16chra.)	0	✱✱✱	(8)	0	1		0	16
13		DAILY	1000	✱✱✱	(8)	1	1		0	9
14		TERM	0	✱✱✱	(8)	0	1		0	9
15	Link PLU		0	✱✱✱		0	1		3	15
16	Transaction	LABEL	76	76		1	1		2	0
17		DAILY	76	76	(16)	1	1		0	8
18		TERM	76	76	(16)	1	1		0	8
19	Cashier PRESET		4	99		1	1		1	3
20		FLAG	4	99	(19)	1	1		0	2

Table No.	File name	RECORD			BLOCK			Label size	Data size
		MRS	Max.	#1	MRS	Max.	#2		
21	TEXT	4	99	(19)	1	1		0	8
22	Cashier transaction LABEL	41	41		4	99	(19)	2	0
23	DAILY	41	41	(22)	4	99	(19)	0	8
24	TERM	41	41	(22)	4	99	(19)	0	8
25	Reset Csr Transaction LABEL	41	41		1	1		2	0
26	DAILY	41	41	(25)	1	1		0	8
27	Total cashier (Buffer) LABEL	41	41		1	1		2	0
28	TOTAL	41	41	(27)	1	1		0	8
29	Clerk PRESET	0	99		0	1		1	3
30	FLAG	0	99	(29)	0	1		0	2
31	TEXT	0	99	(29)	0	1		0	8
32	Clerk transaction LABEL	0	11		0	99	(29)	2	0
33	DAILY	0	11	(32)	0	99	(29)	0	8
34	TERM	0	11	(32)	0	99	(29)	0	8
35	Reset CLK Transaction LABEL	0	11		0	1		2	0
36	DAILY	0	11	(35)	0	1		0	8
37	Total CLK (Buffer) LABEL	0	11		0	1		2	0
38	TOTAL	0	11	(37)	0	1		0	8
39	Hourly LABEL	48	48		1	1		1	0
40	DAILY	48	48	(39)	1	1		0	8
41	Daily net LABEL	32	32		1	1		3	0
42	TOTAL	32	32	(41)	1	1		0	8
43	Reg. buffer	80	255		1	1		0	38
44	Overlapped Cashier	0	255	(43)	0	99	(20)	0	38

[JOB#996, 998] RAM DATA BACKUP function
(ECR↔ ECR, ECR↔ ER-02FD)

[JOB#996] RAM data send

All data

996 → • → ⊗ → X → TL Send to ECR or ER-02FD (Baud rate setting:#903-A)

→ ST Send to ECR (Auto baud rate setting)
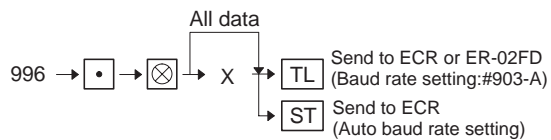
X : SSP = 0
Standard RAM (64KB) = 1
Optional RAM: ER-03RA (512KB) = 2

[JOB#998] RAM data receive

998 → • → ⊗ → TL Receive from ECR or ER-02FD (Baud rate setting:#903-A)

→ ST Receive from ECR (Auto baud rate setting)
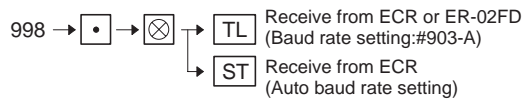
CHAPTER 2. PROGRAM (PGM2/PGM1) MODE

1.Reading of the PGM mode program

[JOB#1100]: DEPT reading

Key operation

```
                    All
              Single item
1100 → ⊗ → XX → ⊗ → XX → TL
         Start No.      End No.
```
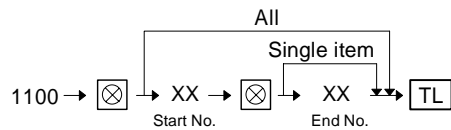
```
YOUR RECEIPT
THANK YOU

04/03/98 15:12        01
111111 #0076    HILL

#1100 *PGM2*

                   01-10
D01                10.00
DPT.O1               G01
0000003            COL17
D02  T123456       20.00
DPT.O2               G02
0000003            COL17
D03  T      6     -30.00
DPT.O3               G10
0000003            C3L17
D04  T      5      40.00
DPT.O4               G11
0000003            C4L17
D05  T      3     -50.00
DPT.O5               G12
0000003            C5L17
D06                60.00
DPT.O6               G13
0000003            COL17
D07               -70.00
DPT.O7               G14
0000003            COL17
D08                80.00
DPT.O8               G01
0000003            COL17
D09                90.00
DPT.O9               G01
0000003            COL17
D10               100.00
DPT.1O               G01
0000003            COL17
```

— Header graphical logo

— Date/Time/Cashier No.
— Machine No./Consecutive No./Cashier name

— JOB#/Mode title

— Range
— Dept.code/Price
— Text/Group No.
— Programming:JOB#2110/Commision group No./HALO

└ Dept.code/Taxable/Price

— Dept.code/Taxable/Sign/Price

[JOB#1200]: PLU reading

Key operation

```
                        All
                 Single item
1200 → ⊗ → XXXXXX → ⊗ → XXXXXX → TL
            Start No.       End No.
```
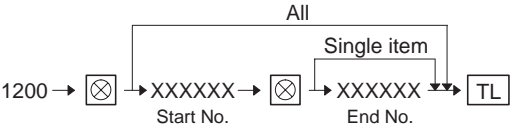
```
YOUR RECEIPT
THANK YOU

04/03/98 15:12        01
111111 #0078    HILL

#1200 *PGM2*

          000001-000010
P000001(O1)          /00
 T123456           100.00
PL000001              C1
002
P000002(O1)          /00
 T123456          -200.00
PL000002              C2
002
P000003(O2)          /00
                  -300.00
PL000003              C3
002
P000004(O2)          /00
 T1                400.00
PL000004              C4
002
P000005(O3) L        /00
                   500.00
PL000005              C5
002
P000006(O3) L        /00
                   600.00
PL000006              C6
002
P000007(O4)          /00
                   700.00
PL000007              C7
002
P000008(O4)          /00
                   800.00
PL000008              C8
002
P000009(O5)          /00
                   900.00
PL000009              C9
002
P000010(O5)          /00
                  1000.00
PL000010              C1
002
```

— Header graphical logo

— Date/Time/Cashier No.
— Machine No./Consecutive No./Cashier name
— JOB#/Mode title

┌ Range
└ PLU code/Associated Dept. code/Base Q'ty
— Taxable/Price
— Text/Commision group No.
— Programming:JOB#2210

— Taxable/Sign/Price

— PLU code/Associated Dept. code/Type:L=Link PLU, (space)=Normal PLU/Base Q'ty

[JOB#2220]: LINK PLU PRESET OR READING

Key operation

```
                        All
                 Single item
2220 → ⊗ → XXXXXX → ⊗ → XXXXXX → TL
         Start No.        End No.
```
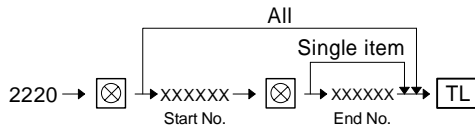
```
YOUR RECEIPT
THANK YOU

04/03/98 15:12        01
111111 #0080    HILL

#2220 *PGM2*

        000001-999999
P000005      LP000010
             P000011
             P000012
             P000013
             P000014
P000006      LP000020
             P000021
             P000022
             P000023
             P000024
```

— Header logo

— Date/Time/Cashier No.
— Machine No./Consecutive No./ Cashier name
— JOB#/Mode title

— Range
— PLU code/Linked PLU code (Max.5)

[JOB#1300]: FUNCTION PRESET READING

Key operation

```
1300 → ⊗ → TL
```
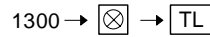
```
YOUR RECEIPT
THANK YOU

04/03/98 15:15        01
111111 #0086    HILL

#1300 *PGM2*

F001 (−) 1
S              -100.00
                   L17
F002 (−) 2
I                -0.00
                   L17
F005 %1
S              -50.00%
              L100.00%
F006 %2
I              -30.00%
              L100.00%
F010 TAX1 ST
F011 TAX2 ST
F012 TAX3 ST
F013 TAX4 ST
F014 TAX5 ST
F015 TAX6 ST
F016 VAT 1
F017 VAT 2
F018 VAT 3
F019 VAT 4
F020 VAT 5
F021 VAT 6
F022 NET1
F023 NET2
F024 CP PLU
F025 REFUND
F026 ∽
F027 ∽ MODE
F028 MGR ∽
F029 SBTL ∽
F030 HASH ∽
F031 HASH RF
F032 VAT SFT
F033 TAX DELE
F035 NO SALE
F037 ***RA          L18
F039 ***PO          L18
F042 CASH           L18
                0000000
F044 CHECK          L18
                0000000
F045 CHECK2         L18
                0000000
F048 CREDIT1        L18
                0000000
F049 CREDIT2        L18
                0000000
```

— Header graphical logo

— Date/Time/Cashier No.
— Machine No./Consecutive No./ Cashier name
— JOB#/Mode title

— Function No./Text
— Type:S=Subtotal, I=Item/ Sign/Amount
— HALO

— Type:S=Subtotal, I=Item/ Sign/Rate

— Function No./Text

— Function No./Text/HALO

— Programming:JOB#2320

```
F050 CREDIT3          L18
                    0000000
F052 EXCH1         JP¥
                 103.000000
F053 EXCH2
                 109.000000
F059 ****CID
                9999999.99
F061 CA/CH ID
F062 CHK/CG
                 999999.99
F063 GUEST
F064 ORDER TL
F065 PAID TL
F066 DOM.CUR1
F067 DOM.CUR2
F070 *CH ID
F071 COM.SAL1
                     2.50%
F072 COM.SAL2
                     3.50%
F073 COM.SAL3
                     4.50%
F074 COM.SAL4
                     0.00%
F075 COM.SAL5
                     5.50%
F076 COM.SAL6
                     0.00%
F077 COM.SAL7
                     0.00%
F078 COM.SAL8
                     0.00%
F079 COM.SAL9
                     0.00%
F080 NON COM.
F081 *DEPT TL
F082 DEPT(-)
F083 *HASH TL
F084 HASH(-)
F085 *BTTL TL
F086 BTTL(-)
F087 NET 1
F088 NET 2
F089 NET 3
F090 NET 4
F091 NET 5
F092 NET 6
F093 SUBTOTAL
F094 MDSE ST
F096 ***TOTAL
F097 CHANGE
F098 ITEMS
F099 PLU ST
F100 COPY
F102 AVE.
F103 GROUP01
F104 GROUP02
F105 GROUP03
F106 GROUP04
F107 GROUP05
F108 GROUP06
F109 GROUP07
```

— Function No./Text/Currency symbol for exchange
— Rate

— Sentinel

— Commision rate

```
F110 GROUP08
F111 GROUP09
F115 O-P
F116 TTL TAX
F117 NET
F118 COM.AMT1
F119 COM.AMT2
F120 COM.AMT3
F121 COM.AMT4
F122 COM.AMT5
F123 COM.AMT6
F124 COM.AMT7
F125 COM.AMT8
F126 COM.AMT9
F127 COM.TTL
F128 DEPT
F129  GROUP
F130 PLU
F131  TRANS.
F132  TL-ID
F133  CLERK
F134 CASHIER
F135  HOURLY
F136  DAILY
F137 ZERO SAL
F138 CATEGORY
F139  SALES
```

[JOB#1400]

1400 → ⊗ → TL

```
   YOUR RECEIPT
   THANK YOU

04/03/98 15:15      01
111111 #0088   HILL

#1400 *PGM2*

01CLK#  KUMAGAI    01
02CLK#  HAKKINEN   02
03CLK#             03
04CLK#             04
05CLK#             05
```

— Header graphical logo

— Date/Time/Cashier No.
— Machine No./Consecutive No./
   Cashier name
— JOB#/Mode title

— Clerk No./Clerk name/
   Clerk code

[JOB#1500]: CASHIER READING REP.

Key operation

1500 → ⊗ → TL

```
   YOUR RECEIPT
   THANK YOU

04/03/98 15:16      01
111111 #0090   HILL

#1500 *PGM2*

01CSR#             01
HILL           0000D1
02CSR#             02
BERGER         0000D1
03CSR#             03
               0000D1
04CSR#             04
               0000D1
```

— Header graphical logo

— Date/Time/Cashier No.
— Machine No./Consecutive No./
   Cashier name
— JOB#/Mode title

— Cashier No./Cashier code
— Cashier name/Programming:
   JOB#2510/Drawer No.

[JOB#2600]: READING OF OTHER

Key operation

2600 → ⊗ → TL

```
     SHARP
  PRESENTS THE
   ER-A450
     SHARP
   IS  THE
     BEST

04/03/98 15:19      01
111111 #0094   HILL

#2600 *PGM2*

#2614
     SHARP
  PRESENTS THE
   ER-A450
     SHARP
   IS  THE
     BEST
#2615              00
#2616
  01         00000000
  02         00000000
  03         00000000
  04         00000000
  05         00000000
  06         00000000
  07         00000000
  08         00000000
  09         00000000
  10         00000000
  11         00000000
  12         00000000
  13         00000000
```

— Header logo

— Date/Time/Cashier No.
— Machine No./Consecutive No./
   Cashier name
— JOB#/Mode title

— Programming:JOB#2614

— Programming:JOB#2615

— Programming:JOB#2616

For ER-A440:

```
#2614
      SHARP
  PRESENTS THE
   ER-A440
#2615              10
```

```
#2617             000
#2619            0 00
#2620

                   00
                   10
                   20
        000001-000010
#2630            1111
#2631            2222
#2632            3333
#2680               0
#2690
  1              0000
  2              0000
  3              0000
```

— Programming:JOB#2617
— Programming:JOB#2619

— Programming:JOB#2620

— Programming:JOB#2630
— Programming:JOB#2631
— Programming:JOB#2632
— Programming:JOB#2680

— Programming:JOB#2690

[JOB#2900]: AUTO KEY READING

Key operation

2900 → ⊗ → TL

```
      SHARP
  PRESENTS THE
    ER-A450
     SHARP                    —— Header logo
    IS  THE
     BEST

04/03/98 15:20      01        —— Date/Time/Cashier No.
111111 #0099   HILL           —— Machine No./Consecutive No./
                                 Cashier name
#2900 *PGM2*                  —— JOB#/Mode title

#01                           —— Auto key No.
            1 KEY
           00 KEY             ⌐—— Programming:JOB#2900
           00 KEY
           D01
#02
            5 KEY
           00 KEY
           00 KEY
            0 KEY
           TOTAL
#03
           ----              —— Not programmed
#04
           ----
#05
           ----
#06
           ----
#07
           ----
#08
           ----
#09
           ----
#10
           ----
```

[JOB#2700]: TAX TABLE READING REP.

Key operation

2700 → ⊗ → TL

```
      SHARP
  PRESENTS THE
    ER-A450
     SHARP                    —— Header  logo
    IS  THE
     BEST

04/03/98 15:20      01        —— Date/Time/Cashier No.
111111 #0097   HILL           —— Machine No./Consecutive No./
                                 Cashier name
#2700 *PGM2*                  —— JOB#/Mode title

TAX1         10.0000%         —— Tax No./Rate
              0.00            —— Lower tax limitation
TAX2         20.0000%
             10.00
TAX3         30.0000%
              0.00
TAX4         40.0000%
              0.00
TAX5         50.0000%
              0.00
TAX6         60.0000%
              0.00
```

[JOB#2119]: DIRECT KEY READING REP.

Key operation

2119 → ⊗ → TL

```
YOUR RECEIPT
THANK YOU

04/03/98 15:14        01
111111 #0084    HILL

#2119 *PGM2*

001           D01
002           D02
003           D03
004           D04
005           D05
006           D06
007           D07
008           D08
009           D09
010           D10
011           D11
012           D12
013           D13
014           D14
015           D15
```

— Header graphical logo

— Date/Time/Cashier No.
— Machine No./Consecutive No./
   Cashier name
— JOB#/Mode title
— Key No./Dept.code
   (JOB#2119)

```
016           D16
017           D17
018           D18
019           D19
020           D20
021           ----
022           ----
023           ----
024           ----
025           ----
026           ----
027           ----
028           ----
029           ----
030      P000001
031      P000002
032      P000003
033      P000004
034      P000005
035           ----
036           ----
037           ----
038           ----
039           ----
040           ----
041           ----
042           ----
043           ----
044           ----
045           ----
046           ----
047           ----
048           ----
049           ----
050           ----
051           ----
052           ----
053           ----
054           ----
055           ----
056           ----
057           ----
058           ----
059           ----
060           ----
061           ----
062           ----
063           ----
064           ----
065           ----
066           ----
067           ----
068           ----
```

— Key No./Inhibit

— Key No./PLU code(JOB#2119)

[JOB#2990]: THERMAL PRINTER REPORT (only ER-A450)

$2990 \rightarrow \boxed{\otimes} \rightarrow \boxed{TL}$

```
       SHARP
   PRESENTS THE
    ER-A450
      SHARP
     IS  THE
      BEST

04/03/98 15:20      01
111111 #0101   HILL

#2990 *PGM2*

            1 0 50

10 : 0123456789ABCDEF
20 : 0123456789ABCDEF
30 : 0123456789ABCDEF
40 : 0123456789ABCDEF
50 : 0123456789ABCDEF
60 : 0123456789ABCDEF
70 : 0123456789ABCDEF
80 : 0123456789ABCDEF
90 : 0123456789ABCDEF
```
— Header logo
— Date/Time/Cashier No.
— Machine No./Consecutive No./Cashier name
— JOB#/Mode title
— Programming:JOB#2990

2. Programming

[JOB#1110]

PROGRAMMING OF DEPT. PRICE

$1110 \rightarrow \boxed{\bullet} \rightarrow \boxed{\otimes} \rightarrow$ XX $\rightarrow \boxed{\otimes} \rightarrow$ YYYYYY $\rightarrow \boxed{ST} \rightarrow \boxed{TL}$

DEPT. CODE / price

No change / For the next DEPT.

CL — Show current code & code entry
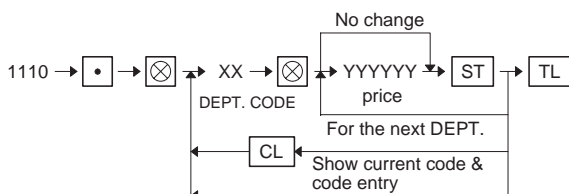
XX: DEPT-CODE = 01 ~ 50

YYYYYY: PRICE = 0 ~ 999999

Preset price is max. 6 digits.

If a price is set for a department which amount entry type is "INHIBIT" or "OPEN", its amount entry type is set as below automatically.

"PRESET"   ← "INHIBIT"

"OPEN&PRESET"   ← "OPEN"

MRS = 000000

[JOB#2110]

PROGRAMMING OF DEPT. FUNCTION

$2110 \rightarrow \boxed{\bullet} \rightarrow \boxed{\otimes} \rightarrow$ XX $\rightarrow \boxed{\otimes} \rightarrow$ ABCDEFG $\rightarrow \boxed{ST} \rightarrow \boxed{TL}$

DEPT. CODE

No change / For next code

CL — Show current code & code entry
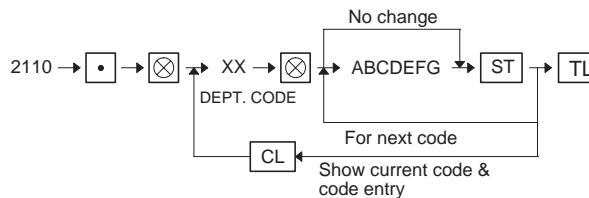
XX: DEPT. code = 01 ~ 50

A: Not used (Fixed at "0")

B (ER-A440):

Item validation printing	B
Non compulsory	0
Compulsory	1

B (ER-A450):   Not used (Fixed at "0")

C, D: Not used (Fixed at "00")

E:

SICS Function	E
Normal	0
Single item cash sale	1
Single item finalize	2

F: Not used (Fixed at "0")

G:

Amount entry type	G
Inhibited	0
Open	1
Preset	2
Open and preset	3

MRS = 0000001

[JOB#2111]

DEPT. TAX STATUS PROGRAMMING

$2111 \rightarrow \boxed{\bullet} \rightarrow \boxed{\otimes} \rightarrow$ XX $\rightarrow \boxed{\otimes} \rightarrow$ ABCDEFG $\rightarrow \boxed{ST} \rightarrow \boxed{TL}$

DEPT. CODE

No change / For next DEPT.

CL — Show current code & code entry

XX: DEPT. CODE = 01 ~ 50

A: Not used (Fixed at "0")

B:

Taxable 6	B
Non taxable	0
Taxable	1

C:

Taxable 5	C
Non taxable	0
Taxable	1

D:

Taxable 4	D
Non taxable	0
Taxable	1

E:

Taxable 3	E
Non taxable	0
Taxable	1

F:	Taxable 2	F
	Non taxable	0
	Taxable	1

G:	Taxable 1	G
	Non taxable	0
	Taxable	1

MRS = 0000000

[JOB#2112]

DEPT. HALO (limit) preset
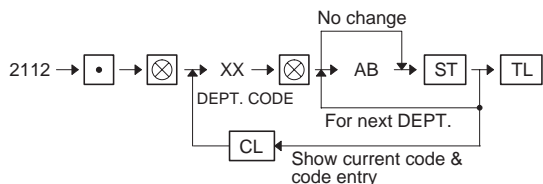
XX: DEPT. CODE = 01 ~ 50

A: Mantissa (HALO) = 0 ~ 9

B: Exponent (HALO) = 0 ~ 7

✻ Items A and B indicate $A \times 10^B$. Any amount below that value is enable within 9999999.

MRS = 17

[JOB#2114]

DEPT. TEXT PROGRAMMING
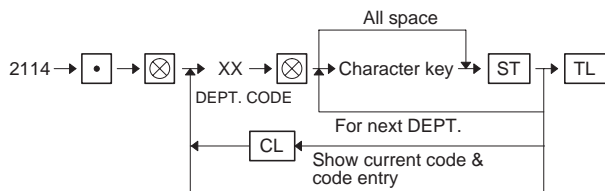
XX: DEPT. CODE = 01 ~ 50

Characters can be entered by using character keys or numeric keys. Please refer to section 4.

MRS = DPT. XX

[JOB#2115]

COMMISSION GROUP PROGRAMMING
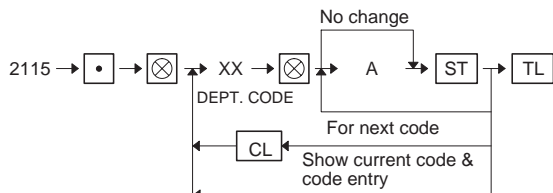
XX: DEPT. CODE = 01 ~ 50

A: Group No. = 0~9

[JOB#2116]

PROGRAMMING OF DEPT. GROUP
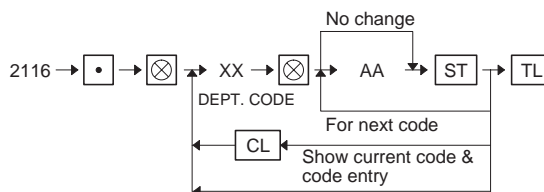
XX: DEPT. code = 01 ~ 50

AA: Group No. = 1 ~ 14

Group No.	Group name
1~9	Plus department
10	Minus department
11	Plus HASH department
12	Minus HASH department
13	Plus BR department
14	Minus BR department

MRS = 01

A selection of the group "Hash" and "BR" are inhibited when the hash and Bottle return function is programmed as disabled in SRV mode.

[JOB#2119]

DEPARTMENT CODE DEFINITION FOR DIRECT DEPT. KEYS
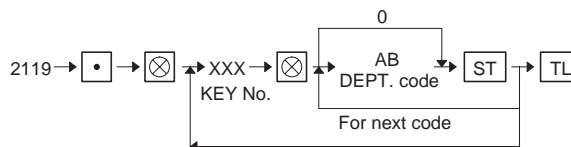
DEPT. code is assigned to the key no. which has been programmed in JOB#951 programming.

XXX: Key No. = 001 to 068

AB: DEPT. CODE = 01 ~ 50

[JOB#1200]

Creating/assigning PLUs and the associated departments.
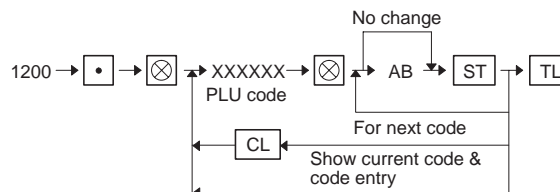
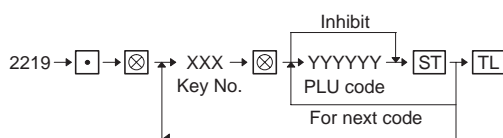| XXXXXX:	PLU code	= 01 ~ 999999
AB:	DEPT. code	= 01 ~ 50

If the record of entered PLU code is not in PLU file at this programming, it will be created in PLU file.
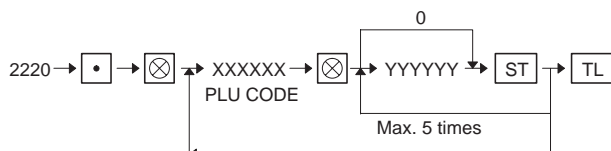
MRS = 01

[JOB#1210]

PRICE PROGRAMMING FOR PLUS
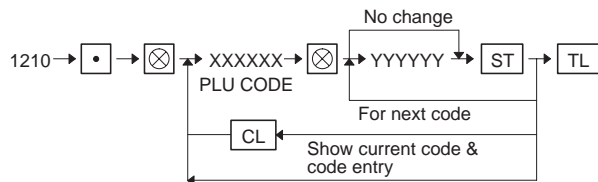
XXXXXX: PLU CODE = 1 ~ 999999

YYYYYY: Amount = 0 ~ 999999

If the record of entered PLU code is not in PLU file at this programming, it will be created in PLU file.

If a price is set for a department which amount entry type is "INHIBIT" or "OPEN", its amount entry type is set as below automatically.

"PRESET"   ← "INHIBIT"
"OPEN&PRESET"   ← "OPEN"

MRS = 000000

[JOB#1211]

PLU BASE Q'TY PROGRAMMING
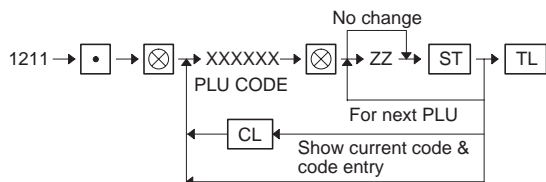
XXXXXX: PLU code   = 1 ~ 999999
ZZ: Base quantity   = 00 ~ 99

If the record of entered PLU code is not in PLU file at this programming, it will be created in PLU file.

[JOB#2210]

PLU function programming
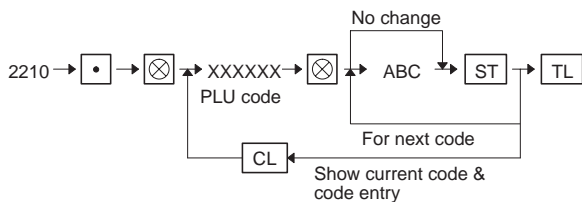
XXXXXX: PLU code = 1~999999

A, B: Not used (Fixed at "00")

C:

Amount entry type	C
Inhibited	0
Open	1
Preset	2
Open and preset	3
Delete	4

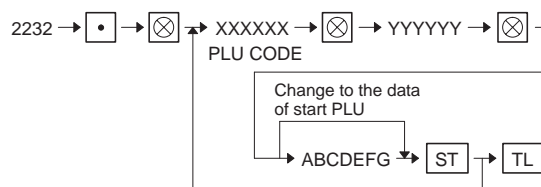If the record of entered PLU code is not in PLU file at this programming, it will be created in PLU file.

MRS = 002

[JOB#2211]

PLU TAX STATUS PROGRAMMING

XXXXXX: PLU code   = 1 ~ 999999

A:

Sign	A
+	0
−	1

B:

Taxable 6	B
Non taxable	0
Taxable	1

C:

Taxable 5	C
Non taxable	0
Taxable	1

D:

VAT 1	D
Non taxable	0
Taxable	1

E:

Taxable 3	E
Non taxable	0
Taxable	1

F:

| Taxable 2	F
Non taxable	0
Taxable	1

G:

Taxable 1	G
Non taxable	0
Taxable	1

If the record of entered PLU code is not in PLU file at this programming, it will be created in PLU file.

MRS = 000000

[JOB#2214]

PLU TEXT PROGRAMMING
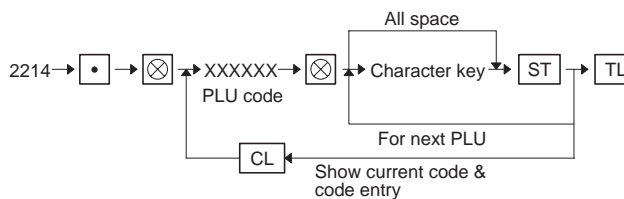
XXXXXX: PLU CODE = 1 ~ 999999

Characters can be entered by using character keys or numeric keys.

Please refer to section 4.

MRS = PLXXXXXX

[JOB#2215]

COMMISSION GROUP PROGRAMMING

```
                              No change
                         ┌─────────────────┐
2215 → • → ⊗ ┌→ XXXXXX → ⊗ ┌→  A  ┐→ ST → TL
             │   PLU code      │
             │            └────┘
             │         For next code
             │  ┌──┐  ┌──────────────────┘
             └──│CL│←─┤ Show current code &
                └──┘    code entry
```
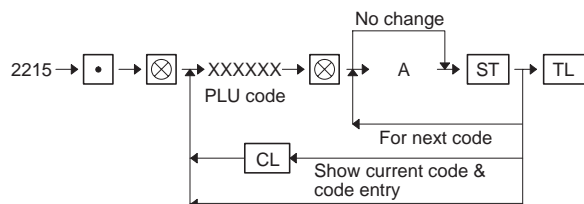
XXXXXX: PLU code = 1 ~ 999999
         Group No. = 0 ~ 9
      A:

If the record of entered PLU code is not in PLU file at this programming, it will be created in PLU file.

MRS = 0

[JOB#2219]

PLU CODE DEFINITION FOR DIRECT PLU KEYS

```
                       Inhibit
                    ┌──────────┐
2219 → • → ⊗ ┌→ XXX → ⊗ ┌→ YYYYYY ┐→ ST → TL
             │  Key No.      PLU code
             │            └──────────┘
             │          For next code
             └─────────────┘
```

    XXX: Key No. = 001 to 068
 YYYYYY: PLU code = 1~999999

PLU code is assigned to the key No. which has been programmed in JOB#951 programming.

[JOB#2220]

LINKED PLU PROGRAMMING

```
                              0
                         ┌─────────┐
2220 → • → ⊗ ┌→ XXXXXX → ⊗ ┌→ YYYYYY ┐→ ST → TL
             │  PLU CODE        │
             │           └──────┘
             │          Max. 5 times
             └──────────────┘
```

XXXXXX: PLU code   = 1 ~ 999999
YYYYYY: PLU code   = 1 ~ 999999

When the "ST" key is pressed without entering any number as the first PLU code (YYYYYY), the previous data is cleared.

PLU code should already be defined when they are used in programming here.

MRS = 0

[JOB#2230]

PLU CODE PROGRAMMING (range)

```
2230 → • → ⊗ ┌→XXXXXX → ⊗ → YYYYYY → ⊗ ┐
             │  PLU CODE     PLU CODE     │
             │   ┌──────────────────────┘
             │   │ Change to the data
             │   │ of start PLU
             │   └→ ZZ ┐→ ST → TL
             └────────┘
```
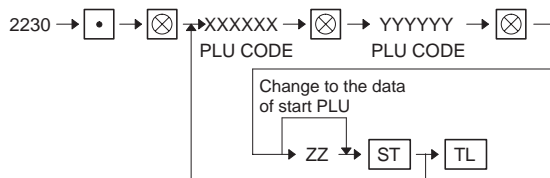
XXXXXX: Start PLU code   = 1 ~ 999999
YYYYYY: End PLU code   = 1 ~ 999999
    ZZ: Dept. code = 1~50

It changes the data of PLU records only which exists in PLU file in the

entered range of PLU code.

[JOB#2231]

PLU function programming (RANGE)
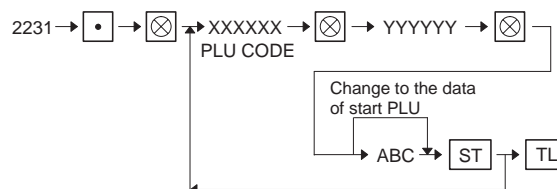
```
2231 → • → ⊗ ┌→ XXXXXX → ⊗ → YYYYYY → ⊗ ┐
             │  PLU CODE                   │
             │   ┌────────────────────────┘
             │   │ Change to the data
             │   │ of start PLU
             │   └→ ABC ┐→ ST → TL
             └────────┘
```

XXXXXX: Start PLU code = 1~999999
YYYYYY: End PLU code = 1~999999

    A, B: Not used (Fixed at "00")

       C:

Amount entry type	C
Inhibited	0
Open	1
Preset	2
Open and preset	3
Delete	4

It changes the data of all PLU records in the entered range of PLU code.

If the record of entered range of PLU code is not in PLU file, it will be created in PLU file.

MRS = 0

[JOB#2232]

PLU TAX STATUS PROGRAMMING (RANGE)

```
2232 → • → ⊗ ┌→ XXXXXX → ⊗ → YYYYYY → ⊗ ┐
             │  PLU CODE                   │
             │   ┌────────────────────────┘
             │   │ Change to the data
             │   │ of start PLU
             │   └→ ABCDEFG ┐→ ST → TL
             └────────────┘
```

XXXXXX: Start PLU code   = 1 ~ 999999
YYYYYY: End PLU code   = 1 ~ 999999

A:	Sign	A
	+	0
	−	1

B:	Taxable 6	B
	Non taxable	0
	Taxable	1

C:	Taxable 5	C
	Non taxable	0
	Taxable	1

D:	VAT 1	D
	Non taxable	0
	Taxable	1

E:	Taxable 3	E
	Non taxable	0
	Taxable	1

F:	Taxable 2	F
	Non taxable	0
	Taxable	1

G:	Taxable 1	G
	Non taxable	0
	Taxable	1

It changes the data of PLU records only which exists in PLU file in the entered range of PLU code.

[JOB#2235]

Commission group programming (RANGE)

2235 → • → ⊗ → XXXXXX → ⊗ → YYYYYY → ⊗
PLU CODE
Change to the data of start PLU
→ A → ST → TL
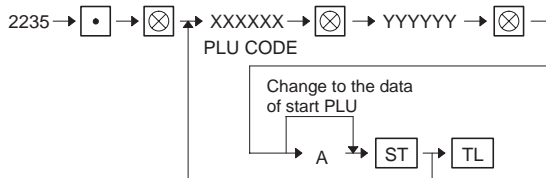
XXXXXX: Start PLU code = 1~999999
YYYYYY: End PLU code = 1~999999
A: Group No. = 0~9

It changes the data of PLU records only which exists in PLU file in the entered range of PLU code.

[JOB#1310]

RATE PROGRAMMING

1310 → • → ⊗ → XXX → ⊗ → Rate or Price → ST → TL
Function No.
No change
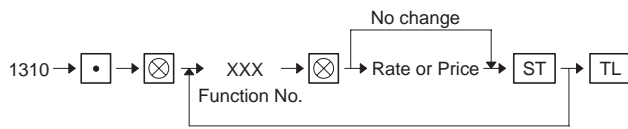
XXX: Fanction No.

(Rate or Price)

YYYYYY: Price for (–)
YYY.YY: Rate for %
YYY.YYYYYY: Rate for EXCHANGE

Function No.	Function	Entry range	Remarks
1	(–)1	0 to 999999	(–) unit price
2	(–)2		
3	(–)3		
4	(–)4		
5	%1	0 to 100.00	% rate
6	%2		
7	%3		
8	%4		
52	Exchange 1	0 to 999.999999	Rate
53	Exchange 2		
54	Exchange 3		
71	Commission 1	0 to 999.99	Rate
72	Commission 2		
73	Commission 3		
74	Commission 4		
75	Commission 5		
76	Commission 6		
77	Commission 7		
78	Commission 8		
79	Commission 9		

MRS = 0

[JOB#2311]

MISC KEY PROGRAMMING 1

2311 → • → ⊗ → XXX → ⊗ → ABCDEFG → ST → TL
Function No.
No change
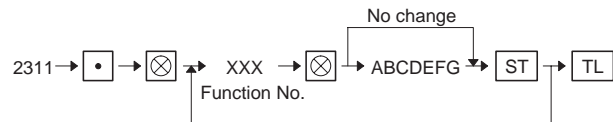
XXX: Function No.

Function No.	Function
1	(–)1
2	(–)2
3	(–)3
4	(–)4
5	%1
6	%2
7	%3
8	%4

A:
Sign	A
+	0
–	1

B, C, D, E, F, G: Not used (Fixed at "000000")

MRS = 100000

[JOB#2312, 2322]

HALO PROGRAMMING

2312
2322 → • → ⊗ → XXX → ⊗ → AB → ST → TL
Function code
No change
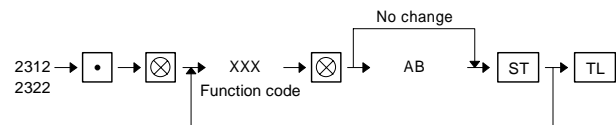
XXX: Function No.
A: Mantissa (0 to 9)
B: Exponent (0 to 7) for (–)/(0 to 8) for RA/PO and each media.

JOB#	Function No.	Function	Remarks
2312	1	(–)1	Item B is specificable within the range from 0 to 7.
	2	(–)2	
	3	(–)3	
	4	(–)4	
	37	RA	Item B is specificable within the range from 0 to 8.
	38	RA2	
	39	PO	
	40	PO2	
2322	42	CA1	Item B is specificable within the range from 0 to 8.
	43	CA2	
	44	CHK1	
	45	CHK2	
	46	CHK3	
	47	CHK4	
	48	CR1	
	49	CR2	
	50	CR3	
	51	CR4	

Entry range, system: $A \times 10^B$

MRS = 17 ((–)1~(–)4)
18 (Others)

[JOB#2313]

MISCELLANEOUS KEY PROGRAMMING (% HALO)

```
                              ┌─── No change ───┐
2313 → • → ⊗ ┬→ XXX → ⊗ ┬→ YYY.YY ─┴→ ST → TL
              │          └─────────────┘
              └──────────────────────────┘
```
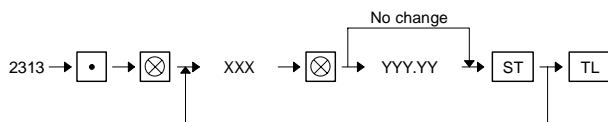
XXX: Function No.

YYY. YY: % HALO

Function No.	Function	Remarks
5	%1	
6	%2	
7	%3	
8	%4	

[JOB#2314]

TEXT PROGRAMMING FOR MISC KEYS

```
                              ┌── All space ──┐
2314 → • → ⊗ ┬→ XXX → ⊗ → Character key ─┴→ ST → TL
            Function number    Max. 12 char.
```
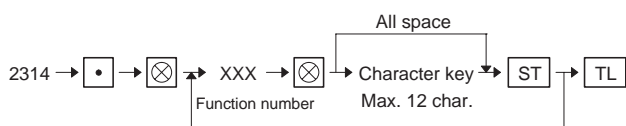
XXX: FUNCTION CODE

Characters can be entered by using character keys or numeric keys. the key entery sequence for entering one character by numeric keys is as follows:

XXX → 00 key   XXX: CHARACTER CODE (3DIGITS)

Please refer to section 4.

F-NO.	FUNCTION	DEFAULT TEXT
1	(−)1	(−) 1
2	(−)2	(−) 2
3	(−)3	(−) 3
4	(−)4	(−) 4
5	%1	%1
6	%2	%2
7	%3	%3
8	%4	%4
9	DIFFER	DIFFER
10	TAXABLE1 ST	TAX1 ST
11	TAXABLE2 ST	TAX2 ST
12	TAXABLE3 ST	TAX3 ST
13	TAXABLE4 ST	TAX4 ST
14	TAXABLE5 ST	TAX5 ST
15	TAXABLE6 ST	TAX6 ST
16	VAT/TAX 1	VAT 1
17	VAT/TAX 2	VAT 2
18	VAT/TAX 3	VAT 3
19	VAT/TAX 4	VAT 4
20	VAT/TAX 5	VAT 5
21	VAT/TAX 6	VAT 6
22	NET1	NET1
23	NET2	NET2
24	COUPON PLU	CP PLU

F-NO.	FUNCTION	DEFAULT TEXT
25	REFUND	REFUND
26	VOID	∽
27	VOID MODE	∽ MODE
28	MANAGER VOID	MGR ∽
29	SBTL VOID	SBTL ∽
30	HASH VOID	HASH ∽
31	HASH REFUND	HASH RF
32	VAT SHIFT	VAT SFT
33	VAT/TAX DELETE	TAX DELE
34	VP COUNTER (for ER-A440 only)	VP CNT
35	NO SALE	NO SALE
36	G.C. COUNTER	G. C. CNT
37	RA	***RA
38	RA2	***RA2
39	PO	***PO
40	PO2	***PO2
41	CHECK CASHING	CA/CHK
42	CASH	CASH
43	CASH2	CASH2
44	CHECK1	CHECK
45	CHECK2	CHECK2
46	CHECK3	CHECK3
47	CHECK4	CHECK4
48	CREDIT1	CREDIT1
49	CREDIT2	CREDIT2
50	CREDIT3	CREDIT3
51	CREDIT4	CREDIT4
52	EXCHANGE1	EXCH1
53	EXCHANGE2	EXCH2
54	EXCHANGE3	EXCH3
55	EXCHANGE4	EXCH4
56	EXCHANGE1 IS	EXCH1 IS
57	EXCHANGE2 IS	EXCH2 IS
58	EXCHANGE3 IS	EXCH3 IS
59	CASH IN DRAWER	****CID
60	CASH/CHECK IS	CA/CH IS
61	CASH/CHECK IN DRAWER	CA/CH ID
62	CHECK CHANGE	CHK/CG
63	CUSTOMER	GUEST
64	ORDER TOTAL	ORDER TL
65	PAID TOTAL	PAID TL
66	DOMESTIC CURRENCY1	DOM.CUR1
67	DOMESTIC CURRENCY2	DOM.CUR2
68	DOMESTIC CURRENCY3	DOM.CUR3
69	DOMESTIC CURRENCY4	DOM.CUR4
70	CHECK IN DRAWER	*CH ID
71	COMMISSION SALE1	COM.SAL1
72	COMMISSION SALE2	COM.SAL2
73	COMMISSION SALE3	COM.SAL3
74	COMMISSION SALE4	COM.SAL4
75	COMMISSION SALE5	COM.SAL5

F-NO.	FUNCTION	DEFAULT TEXT
76	COMMISSION SALE6	COM.SAL6
77	COMMISSION SALE7	COM.SAL7
78	COMMISSION SALE8	COM.SAL8
79	COMMISSION SALE9	COM.SAL9
80	NON COMMISSION SALE	NON.COM
81	(+) DEPT TOTAL	*DEPT TL
82	(−) DEPT TOTAL	DEPT(−)
83	HASH (+) DPT TOTAL	*HASH TL
84	HASH (−) DPT TOTAL	HASH(−)
85	BOTTLE (+) TOTAL	*BTTL TL
86	BOTTLE (−) TOTAL	BTTL(−)
87	NET 1 (TAXABLE1-VAT1)	NET 1
88	NET 2 (TAXABLE2-VAT2)	NET 2
89	NET 3 (TAXABLE3-VAT3)	NET 3
90	NET 4 (TAXABLE4-VAT4)	NET 4
91	NET 5 (TAXABLE5-VAT5)	NET 5
92	NET 6 (TAXABLE6-VAT6)	NET 6
93	SUBTOTAL	SUBTOTAL
94	MDS SBTL	MDSE ST
95	DIFFER SUBTOTAL	DIFF ST
96	TOTAL	***TOTAL
97	CHANGE	CHANGE
98	ITEMS	ITEMS
99	PLU ST (for Link PLU %)	PLU ST
100	COPY RCPT TITLE	COPY
101	G.C. COPY TITLE	G.C. COPY
102	AVERAGE	AVE.
103	GROUP1	GROUP01
104	GROUP2	GROUP02
105	GROUP3	GROUP03
106	GROUP4	GROUP04
107	GROUP5	GROUP05
108	GROUP6	GROUP06
109	GROUP7	GROUP07
110	GROUP8	GROUP08
111	GROUP9	GROUP09
112	CCD	CCD
113	CCD DIFFER	CCD DIF.
114	CCD DIFFER TOTAL	DIF. TL
115	ORDER TL-PAID TL	O−P
116	TOTAL TAX (on Report)	TTL TAX
117	NET WITHOUT TAX (on Report)	NET
118	COMMISSION AMOUNT1	COM.AMT1
119	COMMISSION AMOUNT2	COM.AMT2
120	COMMISSION AMOUNT3	COM.AMT3
121	COMMISSION AMOUNT4	COM.AMT4
122	COMMISSION AMOUNT5	COM.AMT5
123	COMMISSION AMOUNT6	COM.AMT6
124	COMMISSION AMOUNT7	COM.AMT7
125	COMMISSION AMOUNT8	COM.AMT8
126	COMMISSION AMOUNT9	COM.AMT9

F-NO.	FUNCTION	DEFAULT TEXT
127	COMMISSION AMOUNT TOTAL	COM.TTL
128	DEPT. REPO. TITLE	DEPT
129	GROUP REPO. TITLE	GROUP
130	PLU REPO. TITLE	PLU
131	TRANS. PEPO. TITLE	TRANS.
132	CID REPO. TITLE	TL-ID
133	CLERK REPO. TITLE	CLERK
134	CASHIER REPO. TITLE	CASHIER
135	HOURLY REPO. TITLE	HOURLY
136	DAILY NET REPO. TITLE	DAILY
137	ZERO SALES REPRT TITLE	ZERO SAL
138	CATEGORY REPO. TITLE	CATEGORY
139	COMMISSION REPO. TITLE	SALES

[JOB#2315]

MISC KEY PROGRAMMING (%)

XXX: Function No.

A:
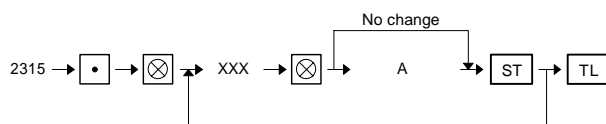
% type	A
Subtotal %	0
Item %	1

Function No.	Function	Remarks
5	%1	
6	%2	
7	%3	
8	%4	

MRS = 0

[JOB#2316]

MISC KEY PROGRAMMING (—)

XXX: Function No.

A:
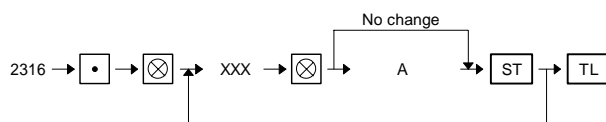
(—) type	A
Subtotal (—)	0
Item (—)	1

Function No.	Function	Remarks
1	(—) 1	
2	(—) 2	
3	(—) 3	
4	(—) 4	

MRS = 0

[JOB#2320]

MEDIA KEY PROGRAMMING

$$2320 \rightarrow \boxed{\cdot} \rightarrow \boxed{\otimes} \rightarrow XXX \rightarrow \boxed{\otimes} \rightarrow ABCDEFG \xrightarrow{\text{No change}} \boxed{ST} \rightarrow \boxed{TL}$$
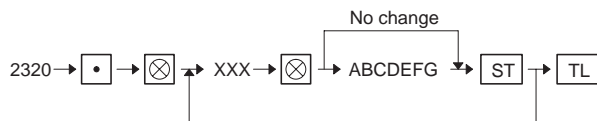
XXX: Function No.

Function No.	Function	A	B	C	D	E	F	G
42	CA1		○	○	○	○	○	○
43	CA2		○	○	○	○	○	○
44	CHK1	○	○	○	○	○	○	○
45	CHK2	○	○	○	○	○	○	○
46	CHK3	○	○	○	○	○	○	○
47	CHK4	○	○	○	○	○	○	○
48	CR1	○	○	○	○	○	○	○
49	CR2	○	○	○	○	○	○	○
50	CR3	○	○	○	○	○	○	○
51	CR4	○	○	○	○	○	○	○

✱ Items marked with (○) are programmable.

A:

EFT function	A
Non compulsory	0
Compulsory	1

B:

Footer print	B
No	0
Yes	1

C:

Non-add code entry	C
Non compulsory	0
Compulsory	1

D:

Change due	D
Enable	0
Disable	1

E (For ER-A440):

VP	E
Non compulsory	0
Compulsory	1

E (For ER-A450): Not used (Fixed at "0")

F:

Drawer opening	F
Yes	0
No	1

G:

Entry of amount tendered	G
Non compulsory (Cash, Check) Inhibit (CR1 to CR4)	0
Compulsory	1

MRS=0000000

[JOB#2321]

MEDIA KEY FUNCTION PROGRAM (AMOUNT HALO)

$$2321 \rightarrow \boxed{\cdot} \rightarrow \boxed{\otimes} \rightarrow XXX \rightarrow \boxed{\otimes} \rightarrow YYYYYYYY \xrightarrow{\text{No change}} \boxed{ST} \rightarrow \boxed{TL}$$
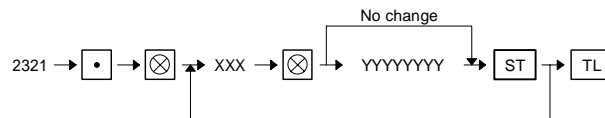
XXX: Function No.
YYYYYYYYY: Limitation amount

Func. No.	Function	Entry range	MRS
59	CID (Sentinel)	0 to 999999999	999999999
62	CHK CHANGE	0 to 99999999	99999999
41	CA/CHK	0 to 99999999	99999999

[JOB#2324]

CURRENCY DESCRIPTER

$$2324 \rightarrow \boxed{\cdot} \rightarrow \boxed{\otimes} \rightarrow \underset{\text{Function No.}}{XXX} \rightarrow \boxed{\otimes} \xrightarrow{\text{No change}} \underset{\text{(4 chara.)}}{\text{Character key}} \rightarrow \boxed{ST} \rightarrow \boxed{TL}$$
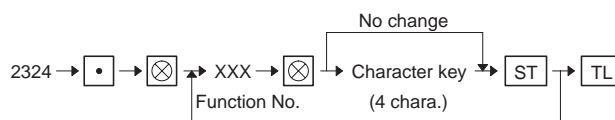
XXX: Function No.

Function No.	Function	Remarks
52	Exchange 1	
53	Exchange 2	
54	Exchange 3	
55	Exchange 4	

Character can be entered by using character keys or numeric keys. The key entry sequence for entering one character by numeric keys is as follows:

XXX → 00 KEY   XXX: Character code (3 digits)

Please refer to section 4.

MRS = "space"

This symbol is printed with (+) amount of foreign currency. The programmed characters is printed at left side of amout.

Ex) Case of "DM":

EXCH1   1.234567
DM 1.23

Programmed symbol

If some space characters are programmed at the left side of symbol (like " ✱ "), they are not counted as the number of character of the currency symbol. (In case of "   DM", the number of character is 2.)

Ex) Case of "   DM": (The currency symbol means "DM")

[JOB#1400]

CLERK CODE DIFINITION

$$1400 \rightarrow \boxed{\cdot} \rightarrow \boxed{\otimes} \rightarrow XX \rightarrow \boxed{\otimes} \xrightarrow{\text{No change}} YY \rightarrow \boxed{ST} \rightarrow \boxed{TL}$$
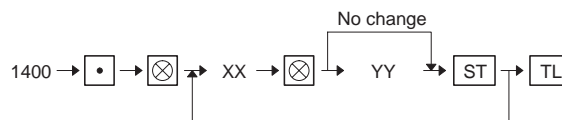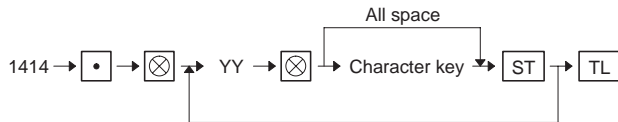
XX: Clerk No.= 1 ~ 99
YY: Clerk code = 00 ~ 99

MRS = No record (It is set same code as clerk No. when a clerk file is created.)

[JOB#1414]

CLERK NAME PROGRAMMING

All space

1414 → • → ⊗ → YY → ⊗ → Character key → ST → TL

YY: Clerk code = 1 ~ 99

Characters can be entered by using character keys or numeric keys. The key entry sequence for entering one character by numeric keys is as follows:

XXX → 00 KEY   XXX: Character code (3 digits)

Please refer to section 4.

Max. 8 characters

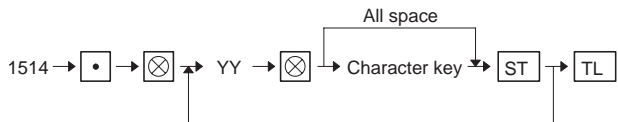MRS = No record (It is set all space when a clerk file is created.)

[JOB#1500]

CASHIER CODE DEFINITION

No change

1500 → • → ⊗ → XX → ⊗ → YY → ST → TL
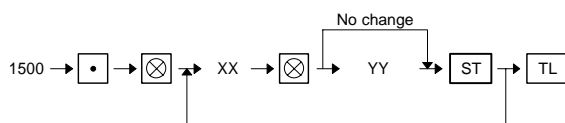
XX: Cashier No.= 1 ~ 99
YY: Cashier code = 00 ~ 99

MRS = 01;1, 02;2, 03;3, 04;4
    (Some code as cashier No.)

[JOB#1514]

CASHIER NAME PROGRAMMING

All space

1514 → • → ⊗ → YY → ⊗ → Character key → ST → TL

YY: Cashier code = 01 ~ 99

Characters can be entered by using character keys or numeric keys. The key entry sequence for entering one character by numeric keys is as follows:

XXX → 00 KEY   XXX: Character code (3 digits)

Please refer to section 4.

Max. 8 characters

MRS = 'Space'

[JOB#2510]

CASHIER PROGRAMMING

No change

2510 → • → ⊗ → YY → ⊗ → ABCDE → ST → TL
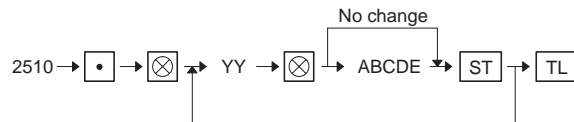
YY: Cashier code = 01~99

A:	G.C. copy	A
	Enable	0
	Disable	1

B:	VAT shift	B
	Not	0
	State	1

C, D: Not used (Fixed at "00")

E:	Drawer No.	H
	Not open	0
	Drawer No.	1~2

MRS = 00001

[JOB#2610]

DATE SETTING

2610 → • → ⊗ → XXYYZZ → TL
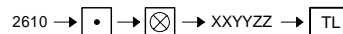
XXYYZZ: Date (Year-Month-Day/Day-Month-Year/Month-Day-Year)

∗ The date entry format complies with the applicable SRV-mode programming.

MRS = 010100

[JOB#2611]

TIME SETTING

0

2611 → • → ⊗ → XXYY → TL
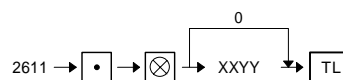
XX: Hour (00 ~ 23)
YY: Minute (00 ~ 59)

MRS = 0

[JOB#2612]

MACHINE NUMBER SETTING

0

2612 → • → ⊗ → XXXXXX → TL
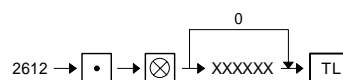
XXXXXX: Machine number (0 ~ 999999)

MRS = 0

[JOB#2613]

CONSECUTIVE NUMBER SETTING

0

2613 → • → @/FOR → XXXX → CA/AT

XXXX: Consecutive number (0000 ~ 9999)

MRS = 0000

[JOB#2614]

LOGO TEXT PROGRAMMING
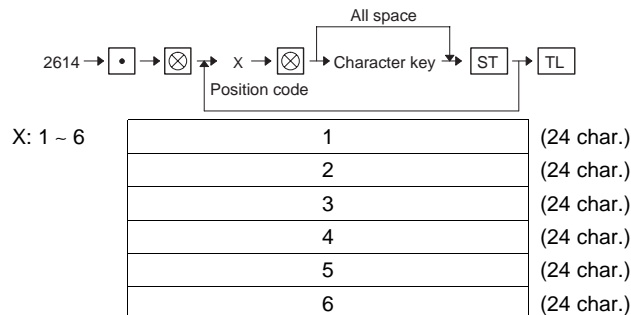
X: 1 ~ 6	1	(24 char.)
	2	(24 char.)
	3	(24 char.)
	4	(24 char.)
	5	(24 char.)
	6	(24 char.)

Character can be entered by using character keys or numeric keys.

The key entry sequence for entering one character by numeric keys is as follows:

XXX → 00 Key   XXX: Character code (3 digits)

Please refer to section 4.
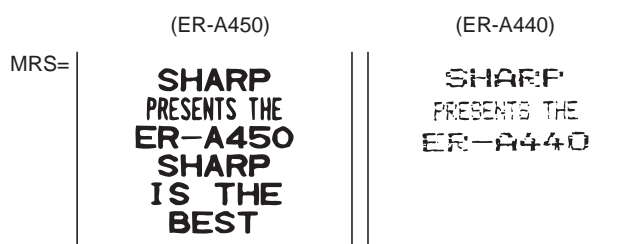
NOTE: This programming is related to JOB# 912D programming. The programable line has below relations with each key word at JOB# 912D.

"6-line header":   All 6 lines are programmable.
"3-line header":   Upper 3 lines (1st-3rd line) are programmable.
"3-line footer":   Lower 3 lines (4th-6th line) are programmable.
"Graphical LOGO only": No line is programmable.

[JOB#2615]

Programming of the No. of times of validation printing and feed line after printing Differ ST.
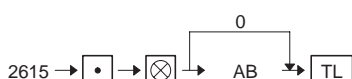
A (For ER-A440): No. of times of validation printing = 0 to 9

A (For ER-A450): Not used (Fixed at "0")

B: Feed line after despression of differ subtotal key = 0 to 9

MRS = 10 (For ER-A440)
            00 (For ER-A450)

[JOB#2616]

OPTIONAL FEATURE
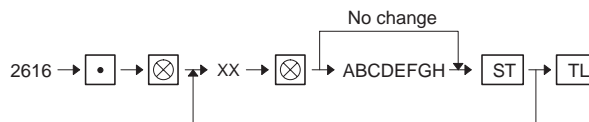
X: 1   MRS = 00000000

A:	OP X/Z report	A
	Enable	0
	Disable	1

B:	PO operation in REG mode	B
	Enable	0
	Disable	1

C: Not used (Fixed at "0")

D:	"RFND" key entry in REG mode	D
	Enable	0
	Disable	1

E:	Direct void function in REG mode	E
	Enable	0
	Disable	1

F:	Indirect void in REG mode	F
	Enable	0
	Disable	1

G:	Subtotal void in REG mode	G
	Enable	0
	Disable	1

H (For ER-A440):

Refund VP	H
Non compulsory	0
Compulsory	1

H (For ER-A450): Not used (Fixed at "0")

X: 2   MRS = 00000000

A:	The first last item void	A
	Enable	0
	Disable	1

B, C: Not used (Fixed at "00")

D:	Printing of the number of purchases	D
	No	0
	Yes	1

E:	Time print	E
	Yes	0
	No	1

F:	Printing of journal	F
	Full print	0
	Journal select	1

G (For ER-A440):

Item VP	G
Enable	0
Disable	1

G (For ER-A450): Not used (Fixed at "0")

H (For ER-A440):

(–) VP	H
Non compulsory	0
Compulsory	1

H (For ER-A450): Not used (Fixed at "0")

X: 3   MRS = 00000000

A: Not used (Fixed at "0")

B: Zero skip in Clerk report	B
Yes	0
No	1

C: Zero skip in Cashier report	C
Yes	0
No	1

D: Zero skip in Transaction report	D
Yes	0
No	1

E: Zero skip in Dept. report	E
Yes	0
No	1

F: Zero skip in PLU report	F
Yes	0
No	1

G: Zero skip in Hourly report	G
Yes	0
No	1

H: Zero skip in Daily net report	H
Yes	0
No	1

X: 4   MRS = 00000000

A, B: Not used (Fixed at "00")

C: Vat/Tax amount printing on R/J	C
Yes	0
No	1

D: Taxable amount printing on R/J	D
Yes	0
No	1

E: Net amount printing on R/J	E
Yes	0
No	1

F, G, H: Not used (Fixed at "000")

X: 5   MRS = 00000000

A, B, C: Not used (Fixed at "000")

D: VAT shift system	D
By cashier	0
By shift key	1

E, F, G, H: Not used (Fixed at "0000")

X: 6   Not used   MRS = 00000000
X: 7   MRS = 00000000

A, B: Not used (Fixed at "00")

C: No sale in REG mode	C
Enable	0
Disable	1

D: Finalization in REG mode when ST is zero	D
Enable	0
Disable	1

E, F, G, H: Not used (Fixed at "0000")

X: 8   Not used   MRS = 00000000
X: 9   MRS = 00000000

A, B, C: Not used (Fixed at "000")

D: Printing of EX1 amount for Total and Change	D
No	0
Yes	1

E, F, G: Not used (Fixed at "000")

H (For ER-A440): Not used (Fixed at "0")

H (For ER-A450):

Footer graphic LOGO printing at the end of receipt	H
No	0
Yes	1

X: 10   NOT USED   MRS = 00000000
X: 11   NOT USED   MRS = 00000000
X: 12   NOT USED   MRS = 00000000
X: 13   MRS = 00000000

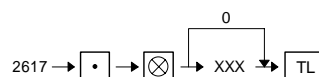| A: Credit totalizer update if RA/PO finalized by Credit key	A
No	0
Yes	1

B: Separator line in report	B
1 line	0
Separator line	1

C: Link PLU print format in REG/MGR mode	C
Each PLU	0
Parent PLU text with total amount	1

D, E, F, G, H: Not used (Fixed at "00000")

[JOB#2617]

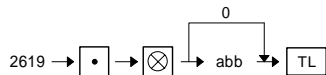PROGRAMMING OF THE TIME INTERVAL FOR THE DRAWER ALARM

XXX: 0 ~ 255 sec

MRS = 000

[JOB#2619]

HOURLY REPORT (Starting time)

$$2619 \rightarrow \boxed{\bullet} \rightarrow \boxed{\otimes} \xrightarrow{\text{0}} abb \rightarrow \boxed{TL}$$

a:	Memory format	A
	30 minutes (24 hour)	0
	60 minutes (24 hour)	1

bb: Starting time (hour): 00 ~ 23

ex)

Case 1.

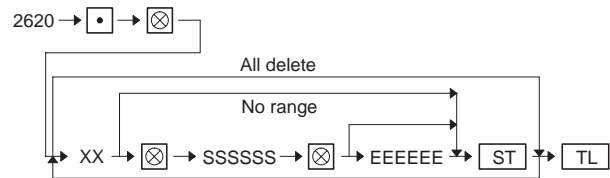$$2619 \rightarrow \boxed{\bullet} \rightarrow \boxed{\otimes} \rightarrow 007 \rightarrow \boxed{TL}$$

X1 Hourly report (#160) (30 min, start time = 7]

```
#160
     7:00
        (DATA)
     7:30
        (DATA)
  SUBTOTAL
        (DATA)
         |
    23:30
        (DATA)
  SUBTOTAL
        (DATA)
     0:00
        (DATA)
     0:30
        (DATA)
  SUBTOTAL
        (DATA)
         |
     6:30
        (DATA)
  SUBTOTAL
        (DATA)
```

24 hours started from 7:00

[JOB#2620]

STACK REPORT

$$2620 \rightarrow \boxed{\bullet} \rightarrow \boxed{\otimes}$$

All delete

No range

$$XX \rightarrow \boxed{\otimes} \rightarrow SSSSSS \rightarrow \boxed{\otimes} \rightarrow EEEEEE \rightarrow \boxed{ST} \rightarrow \boxed{TL}$$

XX: JOB#
SSSSSS: Start code
EEEEEE: End code

JOB#	REPORT NAME	TYPE
00	General	
10	DEPT.	
13	DEPT. All group	
20	PLU	RANGE
27	PLU zero sales	
29	PLU category	RANGE
30	Transaction	
31	CID	
32	Commission sale	
40	All clerk	
50	All cashier	
60	Hourly	ALL
		RANGE (only X report)
70	Daily net	

[✶✶]

Max. 70 step are programmable. "1 step" means the memory size used for one no range type JOB#.
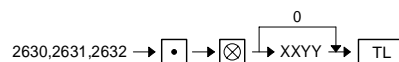
The RANGE type JOB# means "8 steps".

For example)

The memory size for programming JOB#00, 20 and 50 is 10 steps. (ie. 1 step for JOB#00, 8 step for JOB#20, and 1 step for JOB#50.)

[JOB#2630, 2631, 2632]

SECRET CODE PROGRAMMING

$$2630,2631,2632 \rightarrow \boxed{\bullet} \rightarrow \boxed{\otimes} \xrightarrow{\text{0}} XXYY \rightarrow \boxed{TL}$$

#2630: PGM1 mode

#2631: X1/Z1 mode

#2632: X2/Z2 mode

✶ If "0" is entered, "compulsory secret code entry" is canceled.

MRS = 0

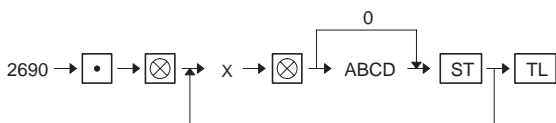## [JOB#2680]

PROGAMMING FOR EXCHANGE DRAWER

$$2680 \rightarrow \boxed{\cdot} \rightarrow \boxed{\otimes} \xrightarrow{\quad 0 \quad} X \rightarrow \boxed{TL}$$

X:	DRAWER No.	X
	Non	0
	#1	1
	#2	2

MRS = 0

[JOB#2690]

THE ASSIGNMENT OF RS232 FUNCTION BY EACH DEVICES

$$2690 \rightarrow \boxed{\cdot} \rightarrow \boxed{\otimes} \rightarrow X \rightarrow \boxed{\otimes} \xrightarrow{\quad 0 \quad} ABCD \rightarrow \boxed{ST} \rightarrow \boxed{TL}$$

X: 1   MRS = 0000

A:	On-line	A
	No	0
	Yes (Channel #8)	8

B, C, D: Not used (Fixed at "000")

X: 2   Not used   MRS = 0000

X: 3   Not used   MRS = 0000

[JOB#2711]

TAX RATE PROGRAMMING

$$2711 \rightarrow \boxed{\cdot} \rightarrow \boxed{\otimes} \rightarrow A \rightarrow \boxed{\otimes} \rightarrow YXXX.XXXX \rightarrow \boxed{\otimes} \xrightarrow{*} XXXXX \rightarrow \boxed{TL}$$

Declaration of TAX   TAX rate   Lower tax limit for add tax.

When lower tax limit is 0. → TL
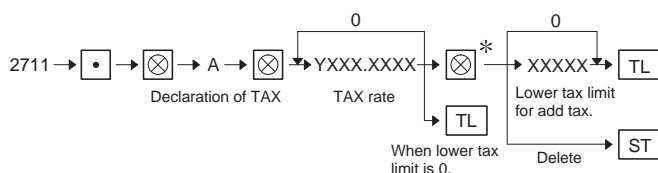
Delete → ST

* DEPRESSION OF THE ST KEY AT FOLLOWING POINTS PER-
FORM A TAX TABLE DELETE OPERATION.

A:	Tax programming	A
	Tax1	1
	Tax2	2
	Tax3	3
	Tax4	4
	Tax5	5
	Tax6	6

Y:	Sign	y
	+	0
	−	1

xxx.xxxx: Rate = 0.0000~100.0000%

LOWER TAX LIMITATION = 0.00 to 999.99

(This is invalid in VAT system.)

MRS = DELETE

[JOB#2900]

<CAUTION>

(This JOB must be performed at X2/Z2 mode position.)
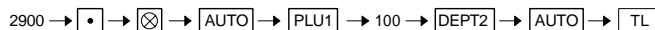
AUTO KEY SETTING
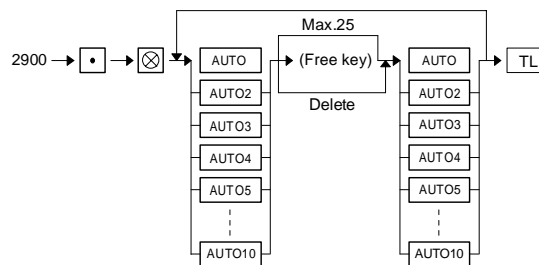
(Auto key function)

- This machine has [AUTO] key which can be programmed by the following key-sequence.
- When [AUTO] key is depressed, the machine works the same as the programmed key-sequence programed.
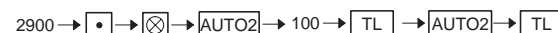
<Example>

Mode switch

⇓

(X2/Z2)

$$2900 \rightarrow \boxed{\cdot} \rightarrow \boxed{\otimes} \rightarrow \boxed{AUTO} \rightarrow \boxed{PLU1} \rightarrow 100 \rightarrow \boxed{DEPT2} \rightarrow \boxed{AUTO} \rightarrow \boxed{TL}$$

(REG)

Key entry	R/J	Display	Comment
AUTO	PL000001 *1.10	PL0000001 1.10	same as PLU1 entry
		1	same as 1 entry
		10	same as 0 entry
		100	same as 0 entry
	DEPT02 *1.00	DEPT02 1.10	same as DEPT2 entry

(X2/Z2)

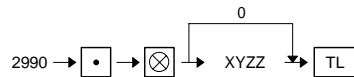$$2900 \rightarrow \boxed{\cdot} \rightarrow \boxed{\otimes} \rightarrow \boxed{AUTO2} \rightarrow 100 \rightarrow \boxed{TL} \rightarrow \boxed{AUTO2} \rightarrow \boxed{TL}$$

(REG)

Key entry	R/J	Display	Comment
DEPT 1	DEPT01 *1.00	DEPT01 1.00	
AUTO 2			
		1	same as 1 entry
		10	same as 0 entry
		100	same as 0 entry
	***TOTAL *1.00	CHANGE 0.00	same as TL entry
	CASH *1.00		
	CHANGE *0.00		

[JOB#2990] (only For ER-A450)

THERMAL PRINTER PROGRAMMING
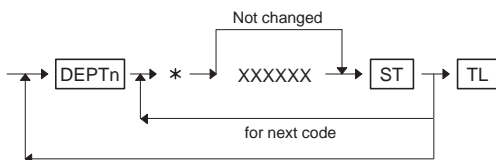

X, Y: Not used (Fixed at "10")

ZZ:

Selecting of light and shade	ZZ
80% for standard	00
90% standard	50
100% standard	99

MRS= 1050

3. Programming by direct key entry

1) PRICE PROGRAMMING for DEPT.
Mode: PGM1/PGM2

XXXXXX: UNIT PRICE (Max. 6 digits)

MRS = 0

∗ If [DPTn] (same as displayed department number) is depressed, programming mode is changed from "PRICE PROGRAMMING" to "FUNCTION PROGRAMMING" (from "FUNCTION PROGRAM-MING" to "PRICE PROGRAMMING").

2) FUNCTION PROGRAMMING for DEPT.
Mode: PGM2

A: Not used (Fixed at "0")

B:

Taxable6	B
Non taxable	0
Taxable	1

C:

Taxable5	C
Non taxable	0
Taxable	1

D:

Taxable4	D
Non taxable	0
Taxable	1

E:

Taxable3	E
Non taxable	0
Taxable	1

F:

Taxable2	F
Non taxable	0
Taxable	1

G:

Taxable1	G
Non taxable	0
Taxable	1

H:

SICS Function	H
Normal	0
Single item cash sale	1
Single item finalize	2

I: Limitation (Mantissa) = 0~9
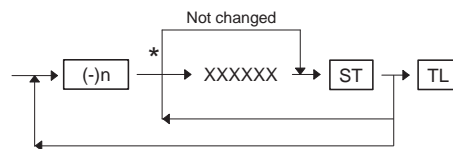
J: Limitation (Exponebt) = 0~7

MRS = 0000000017

∗ If [DPTn] (same as displayed department number) is depressed, programming mode is changed from "PRICE PROGRAMMING" to "FUNCTION PROGRAMMING" (from "FUNCTION PRO-GRAMMING" to "PRICE PROGRAMMING").

∗∗ Double depression of [DPTn] is necessary for the first time.

3) PRICE & MODIFY PROGRAMMING for (–) KEYS.
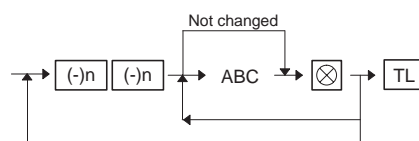### Mode: PGM1/PGM2

XXXXXX: UNIT PRICE (Max. 6 digits)

MRS = 0

∗ If the same [(–)n] key is depressed, programming mode is changed from "PRICE PROGRAMMING" to "FUNCTION PRO-GRAMMING" (from "FUNCTION PROGRAMMING" to "PRICE PROGRAMMING").

4) FUNCTION PROGRAMMING for (–) KEYS.
Mode: PGM2

A:

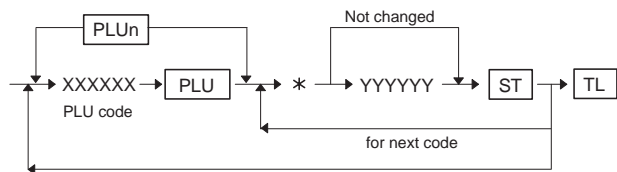| Sign	A
+	0
–	1

B: Limitation (Mantissa) = 0~9

C: Limitation (Exponebt) = 0~7

MRS = 117

∗ If the same [(–)n] key is depressed, programming mode is changed from "PRICE PROGRAMMING" to "FUNCTION PRO-GRAMMING" (from "FUNCTION PROGRAMMING" to "PRICE PROGRAMMING").

5) PLU PRESET PRICE SETTING
Mode: PGM1/PGM2

```
          ┌── PLUn ──┐                ┌── Not changed ──┐
          │          ↓                │                 ↓
→ XXXXXX → PLU ──→ * ──→ YYYYYY ──→ ST ──→ TL
  PLU code                   │
          │                  └─── for next code ───┘
          └────────────────────────────────────────┘
```

XXXXXX:　PLU CODE (1 to 999999)
YYYYYY:　UNIT PRICE (6 digits)

If the record of entered PLU code is not in PLU file at this programming, it will be created in PLU file.

MRS = 0

∗ If the [PLU] or [PLUn] key is depressed, programming mode is changed from "PRICE PROGRAMMING" to "ATTRIBUTE PROGRAMMING" and changed to "PLU ASSOCIATION PROGRAMMING" by depressing the same key again.
(Caution!!)
The associated department is changed if the operater depress [DPTn] key instead of [PLUn] key by mis-operation at this timing.

6) PLU ASSOCIATION TO DEPARTMENTS
Mode: PGM1/PGM2

```
          ┌── PLUn ──┐          ┌── PLU delete ──→ VOID ──┐
          │          ↓          │                         ↓
→ XXXXXX → PLU ──→ * ──┼──→ DPTn ──────────────────→ TL
  PLU code             │    Not changed
          │            └──→ YY ──→ ST
          │                  └── for next code ──┘
          └──────────────────────────────────────┘
```
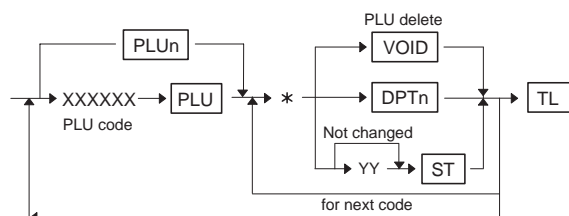
XXXXXX:　PLU CODE (1 to 999999)

YY:　Dept. code (1 to 50)

If the record of entered PLU code is not in PLU file at this programming, it will be created in PLU file.
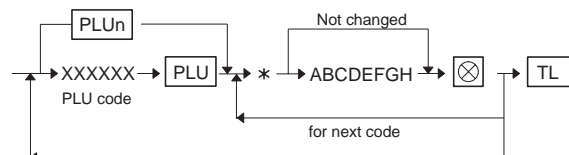
MRS = 01

∗ If the [PLU] or [PLUn] key is depressed, programming mode is changed from "PRICE PROGRAMMING" to "ATTRIBUTE PROGRAMMING" and changed to "PLU ASSOCIATION PROGRAMMING" by depressing the same key again.
(Caution!!)
The associated department is changed if the operater depress [DPTn] key instead of [PLUn] key by mis-operation at this timing.

∗∗ Triple depression of [PLU] or [PLUn] key is necessary for the first time.

7) PROGRAMMING OF PLU/SUBDEPT
Mode: PGM2

```
          ┌── PLUn ──┐          ┌── Not changed ──┐
          │          ↓          │                 ↓
→ XXXXXX → PLU ──→ * ──→ ABCDEFGH ──→ ⊗ ──→ TL
  PLU code             │
          │            └─── for next code ───┘
          └────────────────────────────────────┘
```

XXXXXX:　PLU CODE (1 to 999999)

A:	Sign	A
	+	0
	–	1

B:	Taxable6	B
	Non taxable	0
	Taxable	1

C:	Taxable5	C
	Non taxable	0
	Taxable	1

D:	Taxable4	D
	Non taxable	0
	Taxable	1

E:	Taxable3	E
	Non taxable	0
	Taxable	1

F:	Taxable2	F
	Non taxable	0
	Taxable	1

G:	Taxable1	G
	Non taxable	0
	Taxable	1

H:	Amount entry type	H
	Inhibited	0
	Open	1
	Preset	2
	Open and preset	3
	Delete	4

If the record of entered PLU code is not in PLU file at this programming, it will be created in PLU file.
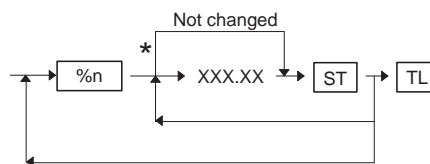
MRS = 00000002

∗ If the [PLU] or [PLUn] key is depressed, programming mode is changed from "PRICE PROGRAMMING" to "ATTRIBUTE PROGRAMMING" and changed to "PLU ASSOCIATION PROGRAMMING" by depressing the same key again.

(Causion!!)　The associated department is changed if the operater depress [DPTn] key instead of [PLUn] key by mis-operation at this timing.

∗∗ Double depression of [PLU] or [PLUn] key is necessary for the first time.

8) PROGRAMMING RATE FOR %KEY.
Mode: PGM1/PGM2

```
          ┌── Not changed ──┐
          │        *        ↓
→ %n ──────→ XXX.XX ──→ ST ──→ TL
  │              │
  └──────────────┘
```
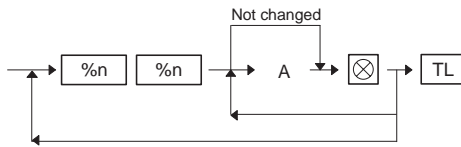
XXX.XX:　0.00 to 100.00

MRS = 0.00%

∗ If the same [%n] key is depressed, programming mode is changed from "RATE PROGRAMMING" to "FUNCTION PROGRAMMING" (from "FUNCTION PROGRAMMING" to "PRICE PROGRAMMING").
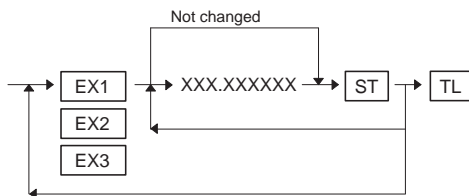
9) PROGRAMMING FOR %KEY.
Mode: PGM2

Not changed

→ [%n] [%n] → A → [⊗] → [TL]

A:

Sign	A
+	0
−	1

MRS = 1

✱ If the same [%n] key is depressed, programming mode is changed
from "RATE PROGRAMMING" to "FUNCTION PROGRAMMING"
(from "FUNCTION PROGRAMMING" to "PRICE PROGRAM-
MING").

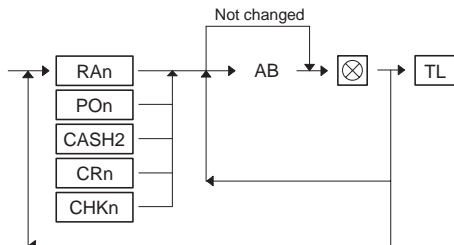## 10) PROGRAMMING RATE FOR EXCHANGE KEY
Mode: PGM1/PGM2

Not changed

→ [EX1] [EX2] [EX3] → XXX.XXXXXX → [ST] → [TL]

XXX.XXXXXX: 0.000000 to 999.999999
MRS = 0.000000

11) PROGRAMMING FOR MEDIA KEYS & FUNC-
TION KEYS.
Mode: PGM2

Not changed

→ [RAn] [POn] [CASH2] [CRn] [CHKn] → AB → [⊗] → [TL]

A: Mantissa (0 to 9)

B: Exponent (0 to 8)

MRS = 18

12) DATE, TIME PROGRAMMING.
Mode: PGM1/PGM2
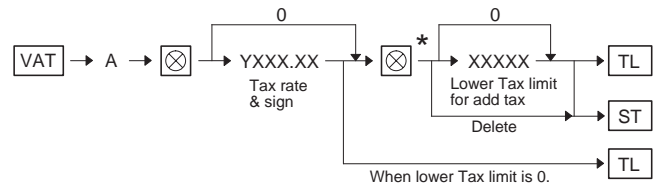
→ XXXXXX → [#]
  DATE
  HHMM
  TIME
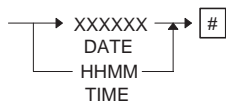
DATE: date entry format follows SRV Programming (6 digits)
TIME: 24 hour system (4 digits)

MRS = DATE: 01/01/00
      TIME: 00:00

13) TAX TABLE PROGRAMMING

[VAT] → A → [⊗] → YXXX.XX → [⊗] ✱ → XXXXX → [TL] [ST] [TL]
                Tax rate   Lower Tax limit
                & sign   for add tax
                                     Delete
                When lower Tax limit is 0.

✱ DEPRESSION OF THE SBTL KEY AT THE FOLLOWING POINTS
MEANS A TAX TABLE DELETE OPERATION.

A: TAX1 PROGRAMMING = 1
    TAX2 PROGRAMMING = 2
    TAX3 PROGRAMMING = 3
    TAX4 PROGRAMMING = 4
    TAX5 PROGRAMMING = 5
    TAX6 PROGRAMMING = 6

% TAX RATE & SIGN
    SIGN   y =   1/0; −/+
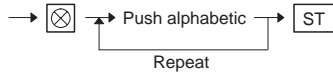   RATE   xxx.xxxx =   0.0000 to 100.0000 %

LOWER TAX LIMITATION   0.00 to 999.99

(This is invalid in VAT system.)

MRS = DELETE

4. Character assignment method

~ **Using alphabetic assignment method** ~

→ ⊗ → Push alphabetic → ST
        ↳ Repeat ↲

Programming key layout

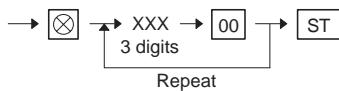|								(DC)		(Shift-2)	(Shift)	₵ æ Æ	(BACK Space)
		β 0						" A	" F	# K	$ P	% U	& X
(∨) 7	(∧) 8	¿ 9						' B	⁎ G	@ L	/ Q	(V	) Y
(··) 4	(˝) 5	(-) 6	§ ø Φ					: C	; H	' M	· R	! W	? Z
(\) 1	(´) 2	(°) 3	(Space)					+ D	- I	= N	ç S		
								< E	> J	Pt O	£ T		

( ) : Function key

(DC)   : Double character code entry key (One-shot)
(Shift)   : Character shift key (Stay-down)
(Shift-2) : Mark key (One-shot)
(BS)   : Back space key

④ Using ten key of ECR

→ ⊗ → XXX → 00 → ST
      3 digits
   ↳ Repeat ↲

Note: 00 key is used to enter each 3 digit alpha code.

Examples

→ " A = A is set

" A (Shift-2) → " A = " is set

(DC) → " A = A (double character code) is set

(Shift) → " A = a (lowercase letter) is set

⁎ Once the (Shift) key is pressed, it stays down until it is pressed again.

<Character Code Table for text programming>

CODE	CHARACTER	CODE	CHARACTER	CODE	CHARACTER	CODE	CHARACTER	CODE	CHARACTER
001	à	023	Ξ	045	–	067	C	089	Y
002	â	024	Π	046	.	068	D	090	Z
003	ê	025	Σ	047	/	069	E	091	Ä
004	î	026	Υ	048	0	070	F	092	Ö
005	ì	027	Φ	049	1	071	G	093	Ü
006	í	028	Ű	050	2	072	H	094	^
007	ô	029	Ú	051	3	073	I	095	_
008	ó	030	Ő	052	4	074	J	096	`
009	û	031	Ó	053	5	075	K	097	a
010	ú	032	(Space)	054	6	076	L	098	b
011	œ	033	!	055	7	077	M	099	c
012	ű	034	"	056	8	078	N	100	d
013	ú	035	#	057	9	079	O	101	e
014	ő	036	$	058	:	080	P	102	f
015	ó	037	%	059	;	081	Q	103	g
016	Λ	038	&	060	<	082	R	104	h
017	Ψ	039	'	061	=	083	S	105	i
018	Γ	040	(	062	>	084	T	106	j
019	··	041	)	063	?	085	U	107	k
020	Ω	042	⁎	064	@	086	V	108	l
021	Δ	043	+	065	A	087	W	109	m
022	Θ	044	,	066	B	088	X	110	n

CODE	CHARACTER		CODE	CHARACTER		CODE	CHARACTER		CODE	CHARACTER		CODE	CHARACTER
111	o		138	⌦		165	·		192	ç		218	′
112	p		139	◄		166	$^{T}1$		193	İ		219	ř
113	q		140	►		167	$^{T}2$		194	Ġ		220	
114	r		141	F		168	$^{T}3$		195	Ş		221	
115	s		142	T		169	$^{T}4$		196	Ģ		222	
116	t		143	↓		170	$^{1}2$		197	ġ		223	
117	u		144	ç		171	$^{1}3$		198	Ķ		224	∗
118	v		145	O		172	$^{1}4$		199	ķ		225	§
119	w		146	¿		173	$^{2}3$		200	Ļ		226	∅
120	x		147	Ù		174	$^{2}4$		201	ļ		227	^
121	y		148	à		175	$^{3}4$		202	Ž		228	↑
122	z		149	Æ		176	⊟		203	Đ		229	]
123	{		150	φ		177	Á		204	đ		230	[
124	|		151	Å		178	í		205	Ć		231	``
125	}		152	¤		179			206	ć		232	ä
126	ß		153	é		180	Ā		207	€		233	ö
127	¢		154	è		181	ā		208	Þ		234	ü
128	!!		155	Pt		182	Ē		209	`		235	æ
129	1		156	¡		183	ē		210	ě		236	å
130	2		157	Ñ		184	Ī		211	š		237	É
131	3		158	ò		185	ï		212	č		238	ñ
132	4		159	£		186	Ū		213	ž			
133	½		160	¥		187	ū		214	ý			
134	^{F}T		161	°		188	Ņ		215	ů			
135	←		162	⌈		189	ņ		216	ň			
136	→		163	⌋		190	Č		217	ˇ			
137	⌦		164	`		191	Š					253	DC

(DC) : Double Code

    : ECR Control Character (Not used for text)

Fig. 7-2

CHAPTER 3. OP X/Z, X1/Z1,X2/Z2 MODE

The following categories of reports can be printed by the ECR.

1) OP X/Z reports (individual clerk reports)

2) X1/Z1 reports (Daily sales total X and Z reports)

3) X2/Z2 reports (Periodic total X and Z reports)

To print reports, use the following key entry sequence

```
        Reading
JOB# → • → ⊗ → Range is required → TL
        Resetting
```

REPORT NAME	MODE *1							*3 DATA FOR		
	OP X/Z		X1/Z1		X2/Z2		F-read	JOB#	READING	NOTE
	X	Z	X1	Z1	X2	Z2	X1 *4			
GENERAL			○	○	○	○		00	—	
DEPT/GROUP			○		○		○	10	—	
IND. GROUP			○		○			12	GROUP No.	
GROUP TOTAL			○		○			13	—	
PLU BY RANGE			○	○	○	○		20	PLU CODE	*2
PLU BY DEPT			○		○			21	DPT CODE	
PLU ZERO SALES			○		○			27	ALL	
PLU PRICE CATEGORY			○		○			29	PRICE	*2
TRANSACTION			○		○			30	—	
TL-ID			○		○		○	31	—	
COMMISSION SALES			○		○			32	—	
ALL CLERK			○	○	○	○		40	—	
IND. CLERK	○	○	○	○	○	○		41	—	
ALL CASHIER			○	○	○	○		50	—	
IND. CASHIER	○	○	○	○	○	○		51	—	
HOURLY (ALL)			○	○				60	—	
(RANGE)			○					60	TIME	*2
DAILY NET					○	○	○	70	—	
STACKED REPORT			○	○	○	○		90	—	

＊1　X1: Daily X report　　Z1: Daily Z report
　　X2: Periodic X report　Z2: Periodic Z report

Stop of printing reports:
The printing of all reports can be stopped by the following operation.

Set the mode switch to "MGR" to cancel.

Note) When the printing is stopped, the consecutive number or Z counter don't return to the original value.
When Z reports, Memory is not reset.

＊1　X1: Daily X report　　Z1: Daily Z report
　　X2: Periodic X report　Z2: Periodic Z report

＊2　PLU code range can be specified by entering the start and end numbers according to the following procedure. When specifying a single time interval, PLU code, the start number has only to be entered.

```
                    All
        ┌──────────────────────►
        │            ┌──────────►
→ XXXXXX → ⊗ → XXXXXX →
   Start No.      End No.
```
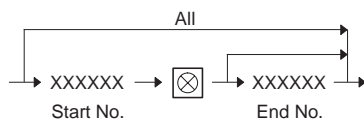
＊3　When 2 is entered in the third digit of a job code, periodic reports are printed.
　　Example:　Daily general report;　job code 100
　　　　　　　Periodic general report;　job code 200

＊4　Reading display only

　　→　KEY　→　CL
　　(Display amount)　(Display initialize)

　　KEY　DEPT　　= DEPTn key
　　　　　CID　　　= ⊗ key
　　　　　Daily Net = ST key

- An individual report is printed on the receipt and journal when the TL key is pressed.

- Pressing the decimal point key just after the entry of a job code clears the corresponding data in the ECR. (Z report)
(When printing those reports for which no Z reports can be taken, the decimal point key cannot be pressed after the entry of a job code.)

- When the decimal point key is not pressed after the entry of a job code, the corresponding data is held in the ECR. (X report)

CHAPTER 4. CHANGING EURO FUNCTION (X2/Z2 mode JOB)

This job is own to be able to be changed easily from local currency system to EURO currency system in X2/Z2 mode.

(Changing EURO Function)

800 → ⬚•⬚ → ⊗ → X → ⬚TL⬚

    X: 1 = EURO STATUS (B)
        2 = EURO STATUS (C)

[About EURO STATUS]

It is executing automatically to change from status (A) to status (B) or (C).
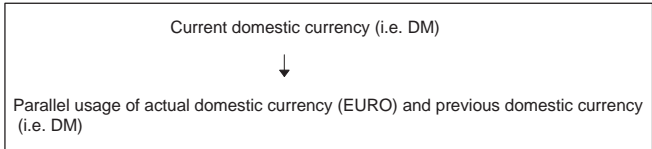
Selectable type is one of below 3 types.

And the selectable type is decided as below for each status.

CURRENT STATUS ↓	Selectable STATUS		
	(A)	(B)	(C)
(A)	—	X	X
(B)	—	—	X
(C)	—	—	—

Marked "X" is selectable

<Selecting type and its action>

(A) to (B):

> Current domestic currency (i.e. DM)
>
> ↓
>
> Parallel usage of actual domestic currency (EURO) and previous domestic currency (i.e. DM)

1) Issue General Z1 report.
2) Issue General Z2 report.
3) Clear GT1/2/3.
4) Set PGM function "EX1 AMOUNT PRINTING FOR TOTAL AND CHANGE" as "YES".
5) Set "Domestic currency symbol" as EURO SYMBOL.

(A) to (C):

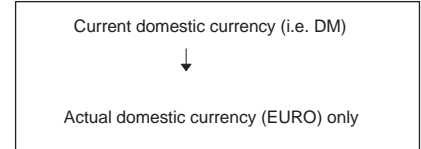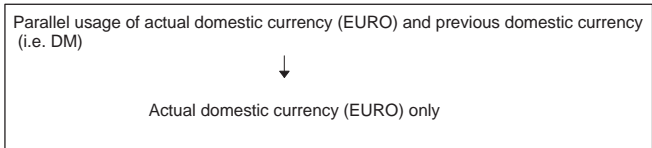> Current domestic currency (i.e. DM)
>
> ↓
>
> Actual domestic currency (EURO) only

1) Issue General Z1 report.
2) Issue General Z2 report.
3) Clear GT1/2/3.
4) Set PGM function "EX1 AMOUNT PRINTING FOR TOTAL AND CHANGE" as "NO".
5) Set "Domestic currency symbol" as EURO SYMBOL.

(B) to (C):

> Parallel usage of actual domestic currency (EURO) and previous domestic currency (i.e. DM)
>
> ↓
>
> Actual domestic currency (EURO) only

1) Issue General Z1 report.
2) Issue General Z2 report.
3) Set PGM function "EX1 AMOUNT PRINTING FOR TOTAL AND CHANGE" as "NO".

(Caution!!)

This JOB cannot set EXCHANGE1 RATE and EXCHANGE1 CURRENCY SYMBOL automatically.

EX1 RATE and EX1 CURRENCY SYMBOL must be set by PGM mode JOB after this job.

SHARP

SHARP

Register Settings for the EURO Introduction

Registrierkassen-Einstellungen für die EURO-Einführung

Réglages de l'enregistreuse pour l'introduction de l'EURO

Ajustes de las cajas registradoras para la introducción del EURO

This leaflet describes the method to set your register so that it corresponds to the EURO system. Though the method is described in the instruction manual, some changes has been conducted already. So, regarding to the EURO setting, refer to this leaflet. (From page 1 to page 5)

Diese Ergänzung beschreibt wie Sie Ihre Registrierkasse einstellen müssen, damit sie auf das EURO-System abgestimmt wird. Obschon das Verfahren bereits in der Bedienungsanleitung beschrieben wurde, wurden bestimmte Punkte nachträglich geändert. Deshalb beziehen Sie sich bitte auf diese Ergänzung, wenn es zur EURO-Einführung kommt (von Seite 6 bis 10).

Cette brochure décrit la méthode de réglage de votre enregistreuse de manière à ce qu'elle corresponde au système de l'EURO. Bien que la méthode soit décrite dans le manuel d'instructions, certains changement ont été effectués. Aussi, en ce qui concerne le réglage de l'EURO, veuillez vous référer à cette brochure (de la page 11 à la page 15).

Este folleto describe el método de ajustar la caja registradora para que corresponda al sistema del EURO. Aunque el método se describe en el manual de instrucciones, ya se han realizado ciertos cambios, por lo que deberá consultar este folleto para realizar el ajuste de la denominación del EURO. (Desde la página 16 a la página 20)

■ Before the register settings for the EURO introduction

As for the introduction of EURO, your register is set to be used the function of exchange 1 ($\boxed{\text{EX1}}$ key) and depending on the steps EURO is introduced in the market, three periods are set as shown on the table below.

Basically your register can be automatically modified to correspond to the introduction of EURO by executing the operation of Job #800 in X2/Z2 mode. However, there are several options you must set depending on your needs. So, please carefully read this leaflet, and conduct necessary settings.

How currencies are treated in your register

		Period 1	Period 2	Period 3
		After the introduction of EURO, and before EURO banknotes and coins begin to circulate	After EURO banknotes and coins begin to circulate, and before national currency is withdrawn from circulation. (Co-existence of EURO and national currency)	After the national currency is withdrawn from circulation
Currency	EURO	Exchange 1	Domestic currency	Domestic currency
	National currency (DM, F, etc.)	Domestic currency	Exchange 1	
	Foreign currency	Exchange 2 to Exchange 4	Exchange 2 to Exchange 4	Exchange 1 to Exchange 4

Receipt samples:

Period 1

```
DPT. 01          ⁂1.00
DPT. 02          ⁂2.00
⁂⁂⁂TOTAL      ⁂3.00
                 €1.56
CASH             ⁂5.00
CHANGE           ⁂2.00
                 €1.04
```
— Sales total amount in national currency (as domestic currency)
— Sales total amount in EURO *
— Tendered amount in national currency
— Change in national currency
— Change in EURO*

*: They are printed for information purposes only.

Period 2

```
DPT. 01          €0.52
DPT. 02          €1.04
⁂⁂⁂TOTAL      €1.56
                 ⁂2.99
CASH             €2.00
CHANGE           €0.44
                 ⁂0.84
```
— Sales total amount in EURO (as domestic currency)
— Sales total amount in national currency*
— Tendered amount in EURO
— Change in EURO
— Change in national currency*

*: They are printed for information purposes only.

Period 3

```
DPT. 01          €0.52
DPT. 02          €1.04
⁂⁂⁂TOTAL      €1.56
CASH             €2.00
CHANGE           €0.44
```

## ■ Automatic modification of register system for introduction of EURO

Note	• Please note that this contents are changed from the ones on your instruction manual.

To make your register correspond to the introduction of EURO, your register system can be automatically modified when the procedure shown below is executed in the X2/Z2 mode. According to the steps of the introduction, you can make your register correspond to EURO.

Procedure

800 ⟶ [•] ⟶ [⊗] ⟶ [*A(1,2 or 3)] ⟶ [TL]
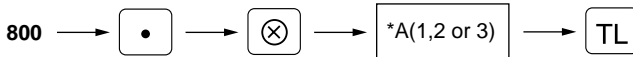
*A=1: Applicable for the period 1
*A=2: Applicable for the period 2
*A=3: Applicable for the period 3

Note	• You can perform the each operation only once with the substitution of "A=1", "A=2" and "A=3". If you performed the operation with the substitution of "A=2" first, you cannot perform the operation with the substitution of "A=1". If you performed the operation with the substitution of "A=3" first, you cannot perform the operation with the substitution of "A=1" and "A=2".

The details of the register system modification are as follows:

When "1" is substituted to "A":
1. Issuing a general Z1 report (Job #100)
2. Issuing a general Z2 report (Job #200)
3. Setting "Yes" for a PGM function "Printing exchange 1 total amount and change amount on receipt and journal" (Job #2616)
4. Setting "Yes" for a PGM function "Printing exchange 1 total amount on validation printing" (Job #2616) <only for ER-A440>
5. Setting "Division" for a PGM function "Exchange 1 calculation method" (Job #2616)
6. Setting the EURO symbol (€) for the currency description text (Job #2334), and setting "2" for the number of digits after decimal point (Job #2330) of exchange 1
7. Setting the round-off function enable for currency exchange

After the execution of the procedure with the substitution of "1", treat EURO as foreign currency using Exchange 1 ([EX1]).

When "2" is substituted to "A":
1. Issuing a general Z1 report (Job #100)
2. Issuing a general Z2 report (Job #200)
3. Resetting GT1, GT2 and GT3
4. Setting "Yes" for a PGM function "Printing exchange 1 total amount and change amount on receipt and journal" (Job #2616)
5. Setting "Yes" for a PGM function "Printing exchange 1 total amount on validation printing" (Job #2616) <only for ER-A440>
6. Setting "Multiplication" for a PGM function "Exchange 1 calculation method" (Job #2616)
7. Changing the domestic currency symbol to the EURO symbol (€) and setting the number of digits after decimal point of the domestic currency to 2
8. For the setting of the currency description text and the number of digits after decimal point of exchange 1, the ones thet had been set to the domestic currency are set. (Job #2330 and #2334)
9. Setting the round-off function enable for currency exchange

After the execution of the procedure with the substitution of "2", treat EURO as domestic currency, and national currency as foreign currency using Exchange 1 (⌷EX1⌷).

Since EURO becomes your domestic currency after execution of the procedure with the substitution of "2", you must change unit prices in the each department and PLU to make prices correspond EURO before actually you start operating your register again. As for the miscellaneous keys, also please change the rates or amounts so that they are based on amounts in EURO.

When "3" is substituted to "A":
1. Issuing a general Z1 report (Job #100)
2. Issuing a general Z2 report (Job #200)
3. Resetting GT1, GT2 and GT3
4. Setting "No" for a PGM function "Printing exchange 1 total amount and change amount on receipt and journal" (Job #2616)
5. Setting "No" for a PGM function "Printing exchange 1 total amount on validation printing" (Job #2616) <only for ER-A440>
6. Setting "Multiplication" for a PGM function "Exchange 1 calculation method" (Job#2616)
7. Changing the domestic currency symbol to the EURO symbol and setting the number of digits after decimal of the domestic currency to 2
8. Over-writing the currency description text of exchange 1 with spaces (Job #2334)
9. Setting the round-off function enable for currency exchange

After the execution of the procedure with the substitution of "3", treat EURO as domestic currency.
When the operation with the substitution of "2" has been performed already, "3. Resetting GT1, GT2 and GT3" is not executed.

■ Optional programming for the introduction of EURO PGM 1   PGM 2

Programming relating with the function of exchange 1(⌷EX1⌷) cannot be changed automatically with the execution of Job #800 described in the previous section. After the execution on each period, conduct the following programming depending on your needs.

Programming for Exchange 1 (⌷EX1⌷)

Currency exchange rate (Job #1310)
For the period 1 and period 2, set the EURO conversion rate.
For the programming details, please refer to your instruction manual.

Cheque/credit operation (Job #2616)
This programming is newly added for the introduction of EURO. Please refer to "Programming for optional feature selection" on this leaflet.

Assigning the drawer number to the drawer for foreign currency (Job #2680)
It may be convenient to have two drawers for EURO (as domestic currency) and national currency (as the foreign currency set in exchange 1) when both of these currencies are co-existing (period 2). In this case, conduct this programming.
For the programming details, please refer to your instruction manual.

■ Programming for optional feature selection PGM 2 2616

For the programming procedure, refer to the instruction manual.

| Note | • Some items on "P: 9" are newly added functions for the introduction of EURO, which do not described on your instruction manual. |

P: 9

Exchange 1 calculation method

"Division" or "Multiplication" can be selected for the conversion method from domestic currency to exchange 1 currency, and the calculation is performed as follows:

In case that "Division" is selected for the period 1,

Domestic currency amount (national currency amount) ÷ Exchange 1 rate (EURO conversion rate) = Exchange 1 amount (EURO amount)

In case that "Multiplication" is selected for the period 2,

Domestic currency amount (EURO amount) × Exchange 1 rate (EURO conversion rate) = Exchange 1 amount (national currency amount)

Printing of the exchange 1 total amount and change amount on the receipt/journal

Total and change amounts in exchange 1 currency are printed respectively below each of the total and exchange amounts in domestic currency.

On the period 1, EURO amount converted from national currency is printed below the national currency, and on the the period 2, national currency converted from EURO amount is printed.

Validation printing of the exchange 1 total amount <only for ER-A440>

Exchange 1 amount converted from total sales amount can be printed on the validation print for total amount when cash, cheque or credit amount tender is performed.

Cash/credit operation for exchange 1

You can set whether you receive foreign currency (exchange 1) amount by cheque or credit or not.

P: 9

| Item:		Selection:	Entry:
A	Always enter 0.		0
B	Exchange 1 calculation method	Multiplication	0
		Division	1
C	Cheque/credit operation for exchange 1	No	0
		Yes	1
D	Printing exchange 1 total amount and change amount on receipt and journal	No	0
		Yes	1
E	Printing exchange 1 total amount on validation printing	No	0
		Yes	1
F and **G**	Always enter 0.		0
H	Footer graphic logo printing	No	0
		Yes	1

| Note | • In case that your register is ER-A440, always enter 0 for item H.
• In case that your register is ER-A450, always enter 0 for item E.
• The items B, D and E are automatically set by the operation of job #800. |

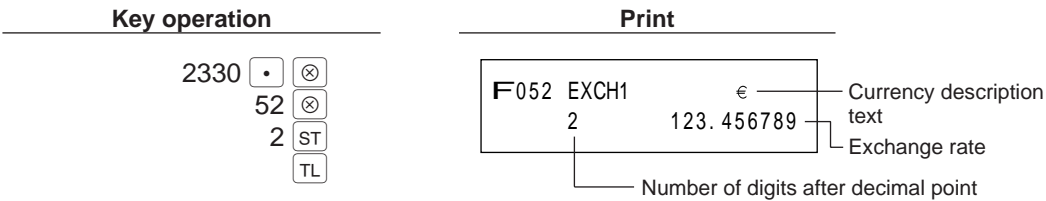## ■ Programming the number of digits after decimal point for exchange keys

PGM 2   2330

Note	• This is a newly added function for the introduction of EURO, which does not described on your instruction manual.
	• This setting for the EX1 is automatically programmed by execution of Job #800.

Procedure

2330 → [•] → [⊗] → *Function no. → [⊗] → Number of digits after decimal point (0-3) → [ST] → [TL]
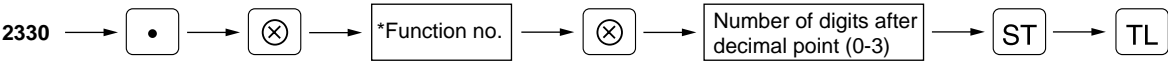
*Function no.:

52: For the EX1 key   53: For the EX2 key   54: For the EX3 key   55: For the EX4 key

Example

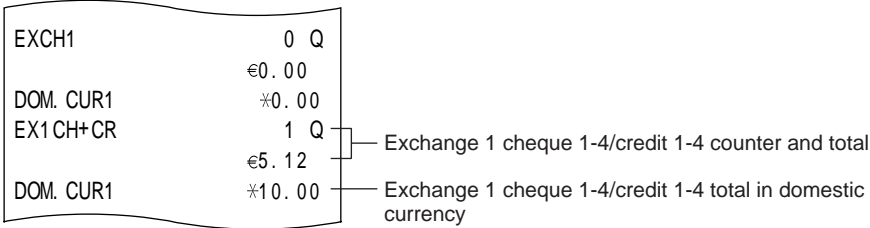| Key operation	Print
2330 [•] [⊗] 52 [⊗] 2 [ST] [TL]	**F**052 EXCH1 € ——— Currency description text 2 123.456789 ——— Exchange rate Number of digits after decimal point

■ Currency exchange in REG mode

If you set "Yes" for the cheque/credit operation for EX1 on the programming of job #2616, you can handle cheque and credit for exchange 1 amount. For example, on the period 1, you can receive cheque and credit in EURO when it is treated in exchange 1 as a foreign currency.

The exchange 1 amount received in the cheque and credit is printed on the reports (#100, #200, #130, #230, #131, #231, #50, #150, #250, #51, #151 and #251) as shown below.

Report sample:

```
EXCH1                  0 Q
                    €0.00
DOM. CUR1           ＊0.00
EX1CH+CR               1 Q
                    €5.12          ]— Exchange 1 cheque 1-4/credit 1-4 counter and total
DOM. CUR1          ＊10.00          — Exchange 1 cheque 1-4/credit 1-4 total in domestic
                                      currency
```

You can change the function text used for the report by job# 2314 in PGM2 mode. For the programming procedure, refer to your instruction manual.

Function no. and default setting are as follows;

Function no.	Function	Default setting
140	Exchange 1 cheque+ credit sales	EX1CH+CR
141	Domestic currency for EX1 cheque + credit sales	DOM.CUR1

■ Vor den Registrierkassen-Einstellungen für die EURO-Einführung

Für die Einführung des EURO benutzt Ihre Registrierkasse die Fremdwährung-1-Funktion ($\boxed{\text{EX1}}$). Je nach dem Zeitpunkt der EURO-Einführung werden in der nachfolgenden Tabelle drei Zeiträume festgelegt.

Grundsätzlich läßt sich Ihre Registrierkasse durch Ausführung von Job #800 im X2/Z2-Modus automatisch modifizieren. Je nach den Erfordernissen sind jedoch zuvor einige Optionen einzustellen. Lesen Sie deshalb diese Ergänzung vor der Ausführung bitte sorgfältig durch.

Verarbeitung der einzelnen Währungen in der Registrierkasse

		Zeitraum 1	Zeitraum 2	Zeitraum 3
		Nach der Einführung des EURO und vor der Zirkulation von EURO-Banknoten und Münzen.	Nach Zirkulation von EURO-Banknoten und Münzen, und bevor die nationale Währung aus dem Verkehr gezogen wird. (Koexistenz von EURO und nationaler Währung)	Nachdem die nationale Währung aus dem Verkehr gezogen ist.
Währung	EURO	Fremdwährung 1	Inlandswährung	Inlandswährung
	Nationale Währung (DM, F, usw.)	Inlandswährung	Fremdwährung 1	
	Fremdwährung	Fremdwährung 2 bis Fremdwährung 4	Fremdwährung 2 bis Fremdwährung 4	Fremdwährung 1 bis Fremdwährung 4

Druckbeispiel für Kassenbon:

Zeitraum 1

```
DPT. 01          *1.00
DPT. 02          *2.00
***TOTAL        *3.00 ── Gesamtumsatz in nationaler Währung (als Inlandswährung)
                 €1.56 ── Gesamtumsatz in EURO*
CASH             *5.00 ── Zahlung in nationaler Währung
CHANGE           *2.00 ── Wechselgeld in nationaler Währung
                 €1.04 ── Wechselgeld in EURO*
```

*: Der Ausdruck dient ausschließlich zu Informationszwecken.

Zeitraum 2

```
DPT. 01          €0.52
DPT. 02          €1.04
***TOTAL        €1.56 ── Gesamtumsatz in EURO (als Inlandswährung)
                 *2.99 ── Gesamtumsatz in nationaler Währung*
CASH             €2.00 ── Zahlung in EURO
CHANGE           €0.44 ── Wechselgeld in EURO
                 *0.84 ── Wechselgeld in nationaler Währung*
```

*: Der Ausdruck dient ausschließlich zu Informationszwecken.

Zeitraum 3

```
DPT. 01          €0.52
DPT. 02          €1.04
***TOTAL        €1.56
CASH             €2.00
CHANGE           €0.44
```

■ Automatische Modifikation des Registrierkassen-Systems für die Einführung des EURO `X2/Z2` `800`

Hinweis	• *Der Inhalt dieser Ergänzung unterscheidet sich vom Inhalt in der Bedienungsanleitung.*

Um Ihre Registrierkasse für die Einführung des EURO vorzubereiten, kann diese gemäß der nachfolgenden Tasteneingabefolge im X2/Z2-Modus automatisch ausgeführt werden. Entsprechend den Schritten der Einführung läßt sich Ihre Registrierkasse auf den EURO abstimmen.

Verfahren

800 ⟶ | **•** | ⟶ | ⊗ | ⟶ *A(1,2 oder 3) ⟶ | TL |
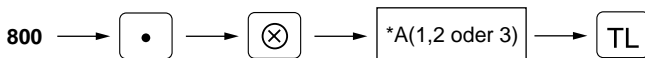
*A=1: Für Zeitraum 1 anwendbar
*A=2: Für Zeitraum 2 anwendbar
*A=3: Für Zeitraum 3 anwendbar

Hinweis	• *Jeder einzelne Vorgang läßt sich nur einmal durch den Ersatz von "A=1", "A=2" und "A=3" durchführen. Wenn der Vorgang mit dem Ersatz von "A=2" zuerst durchgeführt wurde, läßt sich der Vorgang mit dem Ersatz von "A=1" nicht mehr erzielen. Wenn dieser Vorgang mit dem Ersatz von "A=3" zuerst ausgeführt wird, kann der Vorgang nicht mit dem Ersatz von "A=1" und "A=2" durchgeführt werden.*

Die näheren Einzelheiten für die Modifikation des Registrierkassensystems sind wie folgt:

Wenn für "A" "1" gesetzt wird:
1. Ausstellung eines allgemeinen Z1-Berichts (Job #100).
2. Ausstellung eines allgemeinen Z2-Berichts (Job #200).
3. Programmierung von "Ja" für die PGM-Funktion "Ausdruck der Gesamtsumme für die Fremdwährung 1 und des Wechselgeldbetrags auf dem Kassenbon und Journalstreifen" (Job #2616).
4. Programmierung von "Ja" für die PGM-Funktion "Ausdruck der Gesamtsumme für die Fremdwährung 1 auf dem Quittungsdruckformular" (Job #2616). [Nur für ER-A440]
5. Programmierung von "Division" für die PGM-Funktion "Berechnungsmethode für die Fremdwährung 1" (Job #2616).
6. Programmierung des EURO-Symbols (€) für den Währungstext für die Fremdwährung 1 (Job #2334) sowie Programmierung von TAB "2" für die Anzahl der Stellen nach dem Dezimalpunkt für die Fremdwährung 1 (Job #2330).
7. Programmierung für das Aktivieren der Rundungsfunktion für die Fremdwährung.

Nach der Ausführung des Verfahrens mit dem Ersatz von "1" ist der EURO als Fremdwährung zu betrachten. Hierfür die Fremdwährungstaste 1 (EX1) benutzen.

Wenn für "A" "2" gesetzt wird:
1. Ausstellung eines allgemeinen Z1-Berichts (Job #100).
2. Ausstellung eines allgemeinen Z2-Berichts (Job #200).
3. Rückstellung von GT1, GT2 und GT3.
4. Programmierung von "Ja" für die PGM-Funktion "Ausdruck der Gesamtsumme für die Fremdwährung 1 und des Wechselgeldbetrags auf dem Kassenbon und Journalstreifen" (Job #2616).
5. Programmierung von "Ja" für die PGM-Funktion "Ausdruck der Gesamtsumme für die Fremdwährung 1 auf dem Quittungsdruckformular" (Job #2616). [Nur für ER-A440]
6. Programmierung von "Multiplikation" für die PGM-Funktion "Berechnungsmethode für die Fremdwährung 1" (Job #2616).

7. Veränderung des Inlandswährungssymbols zum EURO-Symbol (€) sowie Programmierung von TAB "2" für die Anzahl der Stellen nach dem Dezimalpunkt für die Inlandswährung.
8. Veränderung der bestehenden Einstellungen für den Währungstext und der Anzahl der Stellen nach dem Dezimalpunkt bei der Fremdwährung 1 zu den Einstellwerten, die für die Inlandswährung gewählt wurden (Job #2330 und #2334).
9. Programmierung für das Aktivieren der Rundungsfunktion für die Fremdwährung.

Nach der Ausführung des Verfahrens mit dem Ersatz von "2" ist der EURO als Inlandswährung und die nationale Währung als Fremdwährung zu betrachten. Hierfür die Fremdwährungstaste 1 (EX1) benutzen.
Da der EURO nach der Ausführung des Verfahrens mit dem Ersatz von "2" zu Ihrer Inlandswährung wird, müssen die Festpreise für jede Warengruppe und PLU verändert werden, um diese den EURO-Preisen vor der erneuten Bedienung der Registrierkasse anzugleichen. Eine Reihe anderer Tasten müssen ebenfalls umprogrammiert werden, damit Prozentwerte und Summen auf dem EURO basieren.

Wenn für "A" "3" gesetzt wird:
1. Ausstellung eines allgemeinen Z1-Berichts (Job #100).
2. Ausstellung eines allgemeinen Z2-Berichts (Job #200).
3. Rückstellung von GT1, GT2 und GT3.
4. Programmierung von "Nein" für die PGM-Funktion "Ausdruck der Gesamtsumme für die Fremdwährung 1 und des Wechselgeldbetrags auf dem Kassenbon und Journalstreifen" (Job #2616).
5. Programmierung von "Nein" für die PGM-Funktion "Ausdruck der Gesamtsumme für die Fremdwährung 1 auf dem Quittungsdruckformular" (Job #2616). [Nur für ER-A440]
6. Programmierung von "Multiplikation" für die PGM-Funktion "Berechnungsmethode für die Fremdwährung 1" (Job #2616).
7. Veränderung des Inlandswährungssymbols zum EURO-Symbol (€) sowie Programmierung von TAB "2" für die Anzahl der Stellen nach dem Dezimalpunkt bei der Inlandswährung.
8. Überschreiben des Währungstexts von der Fremdwährung 1 (mit Leerstellen) (Job #2334).
9. Programmierung für das Aktivieren der Rundungsfunktion für die Fremdwährung.

Nach der Ausführung des Verfahrens mit dem Ersatz von "3" ist der EURO als Inlandswährung zu betrachten. Wenn der Vorgang mit dem Ersatz von "2" bereits ausgeführt wurde, so wird "3. Rückstellung von GT1, GT2 und GT3" nicht ausgeführt.

■ Zusätzliche Programmierung für die Einführung des EURO PGM 1   PGM 2

Der Inhalt der Programmierung für die Fremdwährung-1-Funktion (EX1) läßt sich mit der Ausführung von Job #800 (im vorherigen Abschnitt beschrieben) nicht verändern.
Nach der Ausführung für jeden einzelnen Zeitraum ist die folgende Programmierung je nach Kundenwunsch auszuführen.

Programmierung für Fremdwährung 1 (EX1)

Fremdwährungs-Umrechnungskurs (Job #1310)
Für die Zeiträume 1 und 2 ist der EURO-Umrechnungskurs einzugeben.
Für nähere Einzelheiten der Programmierung beziehen Sie sich bitte auf Ihre Bedienungsanleitung.

Scheck/Kreditzahlung (Job #2616)
Diese Programmierung wird bei der Einführung des EURO erforderlich. Bitte beziehen Sie sich auf den Abschnitt "Programmierung für zusätzliche Funktionswahl" in dieser Ergänzung.

Zuweisung der Schubladennummer für Fremdwährung (Job #2680)
Es ist vielleicht empfehlenswert zwei Schubladen für den EURO (als Inlandswährung) und der nationalen Währung (als Fremdwährung in Fremdwährung 1 programmiert) zu haben, wenn beide Währungen nebeneinander bestehen (Zeitraum 2). In diesem Fall muß diese Programmierung ausgeführt werden.
Für nähere Einzelheiten der Programmierung beziehen Sie sich bitte auf Ihre Bedienungsanleitung.

Für das Programmierverfahren beziehen Sie sich bitte auf Ihre Bedienungsanleitung.

Hinweis	• Einige Positionen unter "P: 9" sind neu hinzugefügte Funktionen für die Einführung des EURO. Diese sind nicht in Ihrer Bedienungsanleitung aufgeführt.

P: 9

Berechnungsmethode für Fremdwährung 1

Für die Umrechnungsmethode von Inlandswährung zu Fremdwährung 1 kann "Division" oder "Multiplikation" angewählt werden. Die Berechnung wird dann wie folgt durchgeführt:

Wenn für den Zeitraum 1 "Division" gewählt wurde:

Inlandswährung (nationale Währung) ÷ Fremdwährungs-Umrechnungskurs (EURO-Umrechnungskurs) = Betrag der Fremdwährung 1 (EURO-Betrag)

Wenn für den Zeitraum 2 "Multiplikation" gewählt wurde:

Inlandswährung (EURO-Betrag) × Fremdwährungs-Umrechnungskurs (EURO-Umrechnungskurs) = Betrag der Fremdwährung 1 (nationaler Währungsbetrag)

Ausdruck des Fremdwährungsbetrags 1 sowie des Wechselgeldbetrags auf dem Kassenbon/Journalstreifen

Gesamt- und Wechselgeldbeträge werden in Inlandswährung und Fremdwährung ausgedruckt.

Im Zeitraum 1 wird der aus der Inlandswährung konvertierte EURO unter der Inlandswährung ausgedruckt. Im Zeitraum 2 wird die von EURO konvertierte Inlandswährung ausgedruckt.

Quittungsdruck des Fremdwährung-1-Gesamtbetrags [nur für ER-A440]

Der aus dem Gesamtumsatz konvertierte Fremdwährung-1-Betrag kann als Gesamtbetrag auf der Quittung ausgedruckt werden, wenn die Zahlung in bar, mit Scheck oder Kredit ausgeführt wird.

Bar-/Kreditzahlung für Fremdwährung 1

Die Registrierkasse läßt sich für den Empfang Scheck- oder Kreditzahlung in Fremdwährung (Fremdwährung 1) programmieren, wenn dies gewünscht wird.

P: 9

Positionen:		**Auswahl:**	**Eingabe:**
A	Immer 0 eingeben.		0
B	Berechnungsmethode für Fremdwährung 1	Multiplikation	0
		Division	1
C	Scheck-/Kreditzahlung für Fremdwährung 1	Nein	0
		Ja	1
D	Ausdruck des Fremdwährungsbetrags 1 sowie des Wechselgeldbetrags auf dem Kassenbon/Journalstreifen	Nein	0
		Ja	1
E	Quittungsdruck des Fremdwährung-1-Gesamtbetrags	Nein	0
		Ja	1
F und **G**	Immer 0 eingeben		0
H	Graphisches Logo in der Fußzeile	Nein	0
		Ja	1

Hinweis	• Wenn es sich um das Modell ER-A440 handelt, immer eine 0 für Position H eingeben.
	• Wenn es sich um das Modell ER-A450 handelt, immer eine 0 für Position E eingeben.
	• Die Positionen B, D und E werden durch die Ausführung von Job #800 automatisch eingestellt.

## ■ **Programmierung der Dezimalstellen (TAB) für die Fremdwährungstasten**

PGM 2   2330

Hinweis	• Diese neu hinzugefügten Funktionen für die Einführung des EURO sind nicht in Ihrer Bedienungsanleitung enthalten.
	• Die Programmierung für die Fremdwährung-1-Taste wird durch die Ausführung von Job #800 automatisch erzielt.

Verfahren

2330 → `•` → `⊗` → *Funktions-Nr. → `⊗` → Anzahl der Dezimalstellen (0-3) → `ST` → `TL`
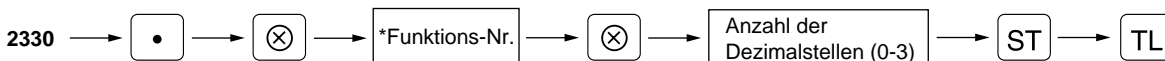
*Funktions-Nr.:

52: Für die Taste `EX1`   53: Für die Taste `EX2`   54: Für die Taste `EX3`   55: Für die Taste `EX4`

Beispiel

Tastenbedienung	Druck
2330 `•` `⊗`	
52 `⊗`	
2 `ST`	
`TL`	

```
F052  EXCH1              €        ── Währungstext
         2      123.456789  ──┐
                              └─ Wechselkurs
```
└─ Anzahl der Dezimalstellen

■ **Scheck-/Kreditzahlung im REG-Modus**

Wenn die Registrierkasse für Scheck-/Kreditzahlung bei der Programmierung von Job #2616 auf "Ja" eingestellt ist, lassen sich Scheck- und Kreditzahlungen für den Fremdwährung-1-Betrag ausführen. Im Zeitraum 1 können Scheck- und Kreditzahlungen in EURO durchgeführt werden.

Der als Scheck- oder Kreditzahlung empfangene Fremdwährung-1-Betrag wird auf den Berichten (#100, 200, 130, 230, 131, 231, 50, 150, 250, 51, 151 und 251) wie nachfolgend gezeigt ausgedruckt.

Berichtsbeispiel:

```
EXCH1                0 Q
                  €0.00
DOM. CUR1          *0.00
EX1 CH+CR            1 Q  ──┐ Fremdwährung 1 Scheck 1-4 / Kreditzahlung 1-4
                  €5.12    ─┘ (Zähler und Gesamtbetrag)
DOM. CUR1         *10.00  ─── Fremdwährung 1 Scheck 1-4 / Kreditzahlung 1-4
                             (Inlandswährung-Gesamtbetrag)
```

Der entsprechende Funktionstext kann verändert werden. Für das Programmierverfahren beziehen Sie sich bitte auf Ihre Bedienungsanleitung.

Die Funktions-Nr. und der Standardtext sind wie folgt:

Funktions-Nr.	Funktion	Standardtext
140	Scheck- und Kreditumsatz für Fremdwährung 1	EX1CH+CR
141	Scheck- und Kreditumsatz Inlandswährung für Fremdwährung 1	DOM.CUR1

■ Avant les réglages de l'enregistreuse pour l'introduction de l'EURO

Concernant l'introduction de l'EURO, votre enregistreuse est réglée pour utiliser la fonction de change 1 (touche ($\boxed{\text{EX1}}$), et, selon la condition où l'EURO est introduit sur le marché, trois périodes sont réglées comme il est montré dans le tableau ci-dessous.

Dans son principe, votre enregistreuse peut être modifiée automatiquement pour correspondre à l'introduction de l'EURO en exécutant l'opération de travail N° 800 sur le mode X2/Z2. Cependant, il y a plusieurs options que vous pouvez choisir selon vos besoins. Aussi, veuillez lire attentivement cette brochure et effectuer les réglages nécessaires.

Comment les monnaies sont traitées dans votre enregistreuse

		Période 1	Période 2	Période 3
		Après l'introduction de l'EURO et avant que les billets de banque et les pièces de monnaie EURO commencent à circuler.	Après que les billets de banque et les pièces de monnaie EURO commencent à circuler et avant que la monnaie nationale ne soit retirée de la circulation. (Coexistence de l'EURO et de la monnaie nationale)	Une fois que la monnaie nationale est retirée de la circulation.
Monnaie	EURO	Change 1	Monnaie domestique	Monnaie domestique
	Monnaie nationale (DM, F, etc.)	Monnaie domestique	Change 1	
	Monnaie étrangère	Change 2 à Change 4	Change 2 à Change 4	Change 1 à Change 4

Exemples de reçus:

Période 1

```
DPT. 01          *1.00
DPT. 02          *2.00
***TOTAL        *3.00 ── Montant total des ventes dans la monnaie nationale (en tant que monnaie domestique)
                €1.56 ── Montant total des ventes en EURO*
CASH             *5.00 ── Somme présentée dans la monnaie nationale
CHANGE           *2.00 ── Rendu dans la monnaie nationale
                €1.04 ── Rendu en EURO*
```

*: Ces chiffres ne sont imprimés que pour renseigner.

Période 2

```
DPT. 01          €0.52
DPT. 02          €1.04
***TOTAL        €1.56 ── Montant total des ventes en EURO (en tant que monnaie domestique)
                *2.99 ── Montant total des ventes dans la monnaie nationale*
CASH             €2.00 ── Somme présentée en EURO
CHANGE           €0.44 ── Rendu en EURO
                *0.84 ── Rendu dans la monnaie nationale*
```

*: Ces chiffres ne sont imprimés que pour renseigner.

Période 3

```
DPT. 01          €0.52
DPT. 02          €1.04
***TOTAL        €1.56
CASH             €2.00
CHANGE           €0.44
```

■ Modification automatique du système de l'enregistreuse pour l'introduction de l'EURO X2/Z2 800

| Nota | • *Veuillez noter que ce qui suit diffère de ce qui se trouve dans votre manuel d'instructions.* |

Pour que votre machine puisse concorder à l'introduction de l'EURO, le système de votre enregistreuse peut être automatiquement modifié lorsque la procédure montrée ci-dessous est exécutée sur le mode X2/Z2. Suivant les étapes de l'introduction, vous pouvez faire en sorte que votre enregistreuse puisse traiter le système EURO.

Procédure

800 ⟶ [•] ⟶ [⊗] ⟶ [*A (1, 2 ou 3)] ⟶ [TL]
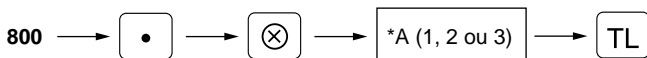
*A=1: Applicable à la période 1
*A=2: Applicable à la période 2
*A=3: Applicable à la période 3

| Nota | • *Vous ne pouvez effectuer chaque opération qu'une fois avec la substitution de "A = 1", "A = 2" et "A = 3". Si vous exécutez l'opération avec d'abord la substitution de "A = 2", vous ne pourrez effectuer l'opération avec la substitution de "A = 1". Si vous exécutez l'opération avec d'abord la substitution de "A = 3", vous ne pourrez effectuer l'opération avec la substitution de "A = 1" et "A = 2".* |

Les détails concernant la modification du système de l'enregistreuse sont les suivants:

Lorsque "1" est substitué à "A":
1. Etablissement d'un rapport général Z1 (travail N° 100).
2. Etablissement d'un rapport général Z2 (travail N° 200).
3. Choix de "Oui" pour la fonction de programmation "Impression du montant total d'un change 1 et du montant d'un rendu sur un reçu et une bande de détails" (travail N° 2616).
4. Choix de "Oui" pour la fonction de programmation "Impression du montant total d'un change 1 sur une impression de validation" (travail N° 2616) <seulement pour la ER-A440>.
5. Choix de "Division" pour la fonction de programmation "Méthode de calcul d'un change 1" (travail N° 2616).
6. Choix du symbole EURO (€) pour le texte descriptif de la monnaie du Change 1 (travail N° 2334) et choix de "2" pour le nombre de chiffres après le point de décimalisation du Change 1 (travail N° 2330).
7. Choix de la fonction d'arrondissement permettant le change d'une monnaie.

Après l'exécution de la procédure avec la substitution de "1", traitez l'EURO en tant que monnaie étrangère en utilisant le Change 1 ([EX1]).

Lorsque "2" est substitué à "A":
1. Etablissement d'un rapport général Z1 (travail N° 100).
2. Etablissement d'un rapport général Z2 (travail N° 200).
3. Remise à zéro des totaux généraux GT1, GT2 et GT3.
4. Choix de "Oui" pour la fonction de programmation "Impression du montant total d'un change 1 et du montant d'un rendu sur un reçu et une bande de détails" (travail N° 2616).
5. Choix de "Oui" pour la fonction de programmation "Impression du montant total d'un change 1 sur une impression de validation" (travail N° 2616) <seulement pour la ER-A440>.
6. Choix de "Multiplication" pour la fonction de programmation "Méthode de calcul d'un change 1" (travail N° 2616).
7. Changement du symbole de la monnaie domestique pour le symbole EURO (€) et réglage du nombre de chiffres après le point de décimalisation de la monnaie domestique sur 2.

8. Changement des réglages du texte descriptif de la monnaie et du nombre de chiffres après le point de décimalisation du Change 1 sur ceux qui ont été choisis pour la monnaie domestique (travaux N° 2330 et N° 2334).

9. Choix de la fonction d'arrondissement permettant le change d'une monnaie.

Après l'exécution de la procédure avec la substitution de "2", traitez l'EURO en tant que monnaie domestique, et la monnaie nationale en tant que monnaie étrangère en utilisant le Change 1 (EX1).

Etant donné que l'EURO devient la monnaie nationale de votre pays après l'exécution de la procédure avec la substitution de "2", vous devez changer les prix unitaires pour chacun des rayons et des PLU (prix par article déjà programmé) pour qu'ils puissent correspondre aux prix EURO avant que vous ne commenciez effectivement la remise en marche de votre enregistreuse. Comme pour les diverses touches, veuillez aussi modifier les taux ou les montants de façon à ce qu'ils soient basés sur des montants en EURO.

Lorsque "3" est substitué à "A":
1. Etablissement d'un rapport général Z1 (travail N° 100).
2. Etablissement d'un rapport général Z2 (travail N° 200).
3. Remise à zéro des totaux généraux GT1, GT2 et GT3.
4. Choix de "Non" pour la fonction de programmation "Impression du montant total d'un change 1 et du montant d'un rendu sur un reçu et une bande de détails" (travail N° 2616).
5. Choix de "Non" pour la fonction de programmation "Impression du montant total d'un change 1 sur une impression de validation" (travail N° 2616) <seulement pour la ER-A440>.
6. Choix de "Multiplication" pour la fonction de programmation "Méthode de calcul d'un change 1" (travail N° 2616).
7. Changement du symbole de la monnaie domestique pour le symbole EURO (€) et réglage du nombre de chiffres après le point de décimalisation de la monnaie domestique sur 2.
8. Recouvrement du texte descriptif de la monnaie du Change 1 complètement avec les espaces (travail N° 2334).
9. Choix de la fonction d'arrondissement permettant le change d'une monnaie.

Après l'exécution de la procédure avec la substitution de "3", traitez l'EURO en tant que monnaie nationale. Lorsque l'opération de la substitution de "2" a déjà été effectuée, "3. Remise à zéro des totaux généraux GT1, GT2 et GT3" n'est pas exécuté.

■ Programmation optionnelle pour l'introduction de l'EURO PGM 1   PGM 2

La programmation se rapportant avec la fonction de change 1 (EX1) ne peut être changée automatiquement avec l'exécution du travail N° 800 décrit dans la section précédente. Après l'exécution de chaque période, effectuez la programmation suivante selon vos besoins.

Programmation pour le Change 1 (EX1)

Taux de change d'une monnaie (Travail N° 1310)
Pour la période 1 et la période 2, réglez sur le taux de conversion EURO.
Pour la programmation des détails, veuillez vous référer à votre manuel d'instructions.

Opération de chèque/crédit (Travail N° 2616)
Cette programmation est nouvellement ajoutée pour l'introduction de l'EURO. Veuillez vous référer à "Programmation pour un choix de fonctions facultatives" dans cette brochure.

Affectation du numéro d'un tiroir au tiroir pour la monnaie étrangère (Travail N° 2680)
Il peut être pratique d'avoir deux tiroirs pour l'EURO (en tant que monnaie domestique) et pour la monnaie nationale (en tant que monnaie étrangère réglée sur le Change 1) lorsque ces deux monnaies coexistent (période 2). Dans ce cas, effectuez cette programmation.
Pour la programmation des détails, veuillez vous référer à votre manuel d'instructions.

■ Programmation pour un choix de fonctions facultatives `PGM 2` `2616`

Pour la procédure de la programmaiton, veuillez vous référer au manuel d'instructions.

| Nota | • *Certains article à "P:9" sont des fonctions nouvellement ajoutées pour l'introduction de l'EURO, fonctions qui ne sont pas décrites dans votre manuel d'instructions.* |

P: 9

Méthode de calcul pour le change 1

"Division" ou "Multiplication" peut être choisie pour la méthode de conversion d'une monnaie domestique à la monnaie d'un change 1, et le calcul est effectué de la manière suivante:

Dans le cas où "Division" est choisie pour la période 1,

Montant de la monnaie domestique (montant de la monnaie nationale) ÷ Taux du change 1 (taux de conversion EURO) = Montant du change 1 (montant EURO)

Dans le cas où "Multiplication" est choisie pour la période 2,

Montant de la monnaie domestique (montant EURO) × Taux du change 1 (taux de conversion EURO) = Montant du change 1 (montant de la monnaie nationale)

Impression du montant total d'un Change 1 et du montant d'un rendu sur un reçu/bande de détails

Les montants du total et du rendu dans la monnaie du Change 1 sont respectivement imprimés au-dessous de chacun des montants du total et du change dans la monnaie domestique.

Dans la période 1, le montant EURO converti à partir de la monnaie nationale, est imprimé au-dessous de la monnaie nationale et, dans la période 2, la monnaie nationale convertie à partir du montant EURO est imprimée.

Impression de validation du montant total d'un Change 1 <seulement pour la ER-A440>

Le montant du Change 1, converti à partir du montant des ventes globales, peut être imprimé sur l'impression de validation pour le montant total lorsque l'offre du montant d'un chèque ou d'un crédit au comptant est effectuée.

Opération de comptant/crédit pour le Change 1

Vous pouvez régler ainsi, si vous recevez le montant de la monnaie étrangère (change 1) par chèque ou par crédit.

P: 9

Article:		Choix:	Entrée:
A	Introduire toujours 0.		0
B	Métode de calcul du Change 1	Multiplication	0
		Division	1
C	Opération chèque/crédit pour Change 1	Non	0
		Oui	1
D	Impression du montant total du change 1 et	Non	0
	montant du rendu sur le reçu/bande de détails	Oui	1
E	Impression du montant total du change 1 sur	Non	0
	l'impression de validation	Oui	1
F et **G**	Introduire toujours 0.		0
H	Impression d'un logo graphique en bas du reçu	Non	0
		Oui	1

| Nota | • *Dans le cas où votre enregistreuse est la ER-A440, introduisez toujours 0 pour l'article H.* |
| | • *Dans le cas où votre enregistreuse est la ER-A450, introduisez toujours 0 pour l'article E.* |
| | • *Les articles B, D et E sont automatiquement réglés par l'opération du travail N° 800.* |

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■ Programmation du nombre de chiffres après le point de décimalisation pour les touches de change PGM 2 2330

Nota	• C'est une fonction nouvellement ajoutée pour l'introduction de l'EURO et qui n'est pas décrite dans votre manuel d'instructions. • Cette programmation pour la touche de Change 1 s'effectue automatiquement avec l'exécution du travail N° 800.

Procédure

2330 → $\cdot$ → $\otimes$ → *N° de la fonction → $\otimes$ → Nombre de chiffres après le point de décimalisation (0-3) → ST → TL
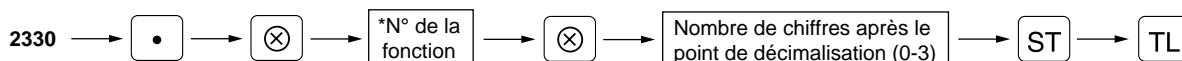
*N° de la fonction:
 52: Pour la touche EX1   53: Pour la touche EX2   54: Pour la touche EX3   55: Pour la touche EX4

Exemple

Manipulation des touches	**Impression**
2330 $\cdot$ $\otimes$ 52 $\otimes$ 2 ST TL	F052 EXCH1 € ← Texte descriptif de la monnaie 2 123.456789 ← Taux de change Nombre de chiffres après le point de décimalisation

■ Change de la monnaie sur le mode d'enregistrement

Si vous choisissez "Oui" pour l'opération de chèque/crédit pour EX1 avec la programmation du travail N° 2616, vous pouvez traiter un chèque et un crédit pour le montant du Change 1. Par exemple, dans la période 1, vous pouvez recevoir un chèque et un crédit en EURO lorsqu'ils sont traités sur le mode de Change 1 en tant que monnaie étrangère.

Le montant du Change 1 reçu en chèque et crédit est imprimé sur les rapports (N° 100, N° 200, N° 130, N° 230, N° 131, N° 231, N° 50, N° 150, N° 250, N° 51, N° 151 et No 251), comme il est montré ci-dessous.

Exemple d'un rapport:

```
EXCH1                0 Q
                  €0.00
DOM. CUR1          ✳0.00
EX1CH+CR             1 Q
                  €5.12
DOM. CUR1          ✳10.00
```
— Compteur et total de chèque 1 - 4/crédit 1 - 4 du change 1
— Total de chèque 1 - 4/crédit 1 - 4 du change 1 dans la monnaie nationale

Vous pouvez changer le texte de la fonction utilisée pour un rapport avec le travail N° 2314 sur le mode PGM2. Pour la procédure de la programmation, référez-vous à votre manuel d'instructions.

Le N° de la fonction et le réglage implicite sont les suivants:

N° de la fonction	Fonction	Réglage implicite
140	Ventes par chèque + crédit du change 1	EX1CH+CR
141	Monnaie nationale pour ventes par chèque + crédit du change 1	DOM.CUR1

■ Antes de realizar los ajustes de la caja registradora para la introducción del EURO

Para la introducción del EURO, la caja registradora está ajustada para emplear la función de divisas 1 (tecla ($\boxed{\text{EX1}}$) y dependiendo de la fecha de introducción del EURO en el mercado, se han ajustado tres períodos como se muestra en la tabla de abajo.

Básicamente, la caja registradora puede modificarse automáticamente para corresponder con la introducción del EURO ejecutando la operación de la tarea N.° 800 en el modo X2/Z2. Sin embargo, hay algunas opciones que usted deberá seleccionar dependiendo de sus necesidades. Por lo tanto, lea este folleto y realice los ajustes necesarios.

Cómo se tratan las monedas en su caja registradora

		Período 1	Período 2	Período 3
		Después de la introducción del EURO, y antes de que empiecen a circular las monedas y billetes de EURO	Después de haber empezado a circular las monedas y billetes de EURO, y antes de retirar de la circulación la moneda nacional (Coexistencia del EURO con la moneda nacional)	Después de retirar de la circulación la moneda nacional
Moneda	EURO	Divisas 1	Moneda nacional	Moneda nacional
	Moneda nacional (DM, F, etc.)	Moneda nacional	Divisas 1	
	Divisas	Divisas 2 a divisas 4	Divisas 2 a divisas 4	Divisas 1 a divisas 4

Muestras de recibos:

Período 1

```
DPT. 01          ⋇1.00
DPT. 02          ⋇2.00
⋇⋇⋇TOTAL        ⋇3.00   ── Importe total de ventas en moneda nacional (como moneda nacional)
                 €1.56   ── Importe total de ventas en EURO*
CASH             ⋇5.00   ── Importe recibido en moneda nacional
CHANGE           ⋇2.00   ── Vuelta en moneda nacional
                 €1.04   ── Vuelta en EURO*
```
*: Se imprimen sólo con motivo de información.

Período 2

```
DPT. 01          €0.52
DPT. 02          €1.04
⋇⋇⋇TOTAL        €1.56   ── Importe total de ventas en EURO (como moneda nacional)
                 ⋇2.99   ── Importe total de ventas en moneda nacional*
CASH             €2.00   ── Importe recibido en EURO
CHANGE           €0.44   ── Vuelta en EURO
                 ⋇0.84   ── Vuelta en moneda nacional*
```
*: Se imprimen sólo con motivo de información.

Período 3

```
DPT. 01          €0.52
DPT. 02          €1.04
⋇⋇⋇TOTAL        €1.56
CASH             €2.00
CHANGE           €0.44
```

■ Modificación automática del sistema de la caja registradora para la introducción del EURO X2/Z2 800

Nota	• *Tenga presente que este contenido se ha cambiado del incluido en el manual de instrucciones.*

Para que su caja registradora satisfaga la introducción del EURO, el sistema de la caja registradora podrá modificarse automáticamente cuando se ejecute el procedimiento siguiente en el modo X2/Z2. De acuerdo con los pasos de la introducción, podrá hacer que la registradora pueda funcionar con el EURO.

Procedimiento

800 ⟶ [•] ⟶ [⊗] ⟶ [*A (1,2 ó 3)] ⟶ [TL]
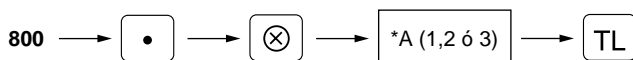
*A=1: Aplicable en el período 1
*A=2: Aplicable en el período 2
*A=3: Aplicable en el período 3

Nota	• *Podrá efectuar cada operación sólo una vez con la sustitución de "A=1", A=2" y "A=3". Si efectúa la operación con la sustitución de "A=2" primero, no podrá efectuar la operación con la sustitución de "A=1". Si efectúa la operación con la sustitución de "A=3" primero, no podrá efectuar la operación con la sustitución de "A=1" ni "A=2".*

A continuación se dan los detalles de la modificación del sistema de la caja registradora:

Cuando "1" se sustituye por "A":
1. Emisión de un informe general Z1 (Tarea #100)
2. Emisión de un informe general Z2 (Tarea #200)
3. Selección de "Sí" para una función PGM "Impresión del importe total de cambio de divisas 1 e importe de la vuelta en el recibo y registro diario" (Tarea #2616)
4. Selección de "Sí" para una función PGM "Impresión del importe total de cambio de divisas 1 en impresión de validación" (Tarea #2616) <sólo para la ER-A440>
5. Selección de "División" para una función PGM "Método de cálculo de cambio de divisas 1" (Tarea #2616)
6. Selección del símbolo del EURO (€) para el texto de descripción de moneda de cambio de divisas 1 (Tarea #2334) y selección de "2" para el número de dígitos de detrás del punto decimal de cambio de divisas 1 (Tarea #2330)
7. Selección de habilitación de la función de redondeo para cambio de divisas

Después de la ejecución del procedimiento con la sustitución de "1", trate el EURO como moneda extranjera empleando cambio de divisas 1 ([EX1]).

Cuando "2" se sustituye por "A":
1. Emisión de un informe general Z1 (Tarea #100)
2. Emisión de un informe general Z2 (Tarea #200)
3. Reposición de GT1, GT2, y GT3
4. Selección de "Sí" para una función PGM "Impresión del importe total de cambio de divisas 1 e importe de la vuelta en el recibo y registro diario" (Tarea #2616)
5. Selección de "Sí" para una función PGM "Impresión del importe total de cambio de divisas 1 en impresión de validación" (Tarea #2616) <sólo para la ER-A440>
6. Selección de "Multiplicación" para una función PGM "Método de cálculo de cambio de divisas 1" (Tarea #2616)
7. Cambio del símbolo de la moneda nacional al símbolo del EURO (€) y ajuste del número de dígitos de detrás del punto decimal de la moneda nacional a 2

17

8. Cambio de los ajustes del texto de descripción de moneda y el número de dígitos de detrás del punto decimal de cambio de divisas 1 a los ajustes seleccionados para la moneda nacional (Tareas #2330 y #2334)

9. Selección de habilitación de la función de redondeo para cambio de divisas

Después de la ejecución del procedimiento con la sustitución de "2", trate el EURO como moneda nacional y la moneda nacional como divisas empleando cambio de divisas 1 (EX1).

Puesto que el EURO pasa a ser la moneda nacional después de la ejecución del procedimiento con la sustitución de "2", deberá cambiar los precios unitarios para cada sección y PLU para que correspondan con los precios en EURO antes de realmente reiniciar la operación de la caja registradora. En cuanto a las teclas misceláneas, cambie también los índices de precios o importes de modo que se basen en importes en EURO.

Cuando "3" se sustituye por "A":

1. Emisión de un informe general Z1 (Tarea #100)

2. Emisión de un informe general Z2 (Tarea #200)

3. Reposición de GT1, GT2, y GT3

4. Selección de "No" para una función PGM "Impresión del importe total de cambio de divisas 1 e importe de la vuelta en el recibo y registro diario" (Tarea #2616)

5. Selección de "No" para una función PGM "Impresión del importe total de cambio de divisas 1 en impresión de validación" (Tarea #2616) <sólo para la ER-A440>

6. Selección de "Multiplicación" para una función PGM "Método de cálculo de cambio de divisas 1" (Tarea #2616)

7. Cambio del símbolo de la moneda nacional al símbolo del EURO (€) y ajuste del número de dígitos de detrás del punto decimal de la moneda nacional a 2

8. Sobreescritura del texto de descripción de moneda de cambio de divisas 1 completamente con espacios (Tarea #2334)

9. Selección de habilitación de la función de redondeo para cambio de divisas

Después de la ejecución del procedimiento con la sustitución de "3", trate el EURO como moneda nacional. Cuando ya se ha efectuado la operación con la sustitución de "2", "3. Reposición de GT1, GT2, y GT3" no se ejecuta.

■ Programación opcional para la introducción del EURO PGM 1   PGM 2

La programación relacionada con la función de cambio de divisas 1 (EX1) no puede cambiarse automáticamente con la ejecución de la tarea #800 descrita en la sección anterior. Después de la ejecución para cada período, realice la programación siguiente dependiendo de sus necesidades.

Programación para cambio de divisas 1 (EX1)

Tasa de cambio de divisas (Tarea #1310)
Para el período 1 y período 2, ajuste la tasa de cambio del EURO.
Para los detalles de la programación, consulte el manual de instrucciones.

Operación de cheques/crédito (Tarea #2616)
Esta programación se ha añadido recientemente para la introducción del EURO. Consulte el apartado de "Programación para selección de funciones opcionales" en este folleto.

Asignación del número de cajón al cajón para moneda extranjera (Tarea #2680)
Puede resultar conveniente tener dos cajones para el EURO (como moneda nacional) y para la moneda nacional (como divisas en cambio de divisas 1) cuando ambas monedas coexisten (período 2). En este caso, lleve a cabo esta programación.
Para los detalles de la programación, consulte el manual de instrucciones.

■ Programación para selección de funciones opcionales PGM 2 2616

Para los detalles de la programación, consulte el manual de instrucciones.

| Nota | • *Algunos de los elementos de "P:9" son funciones recientemente añadidas para la introducción del EURO, que no se describen en el manual de instrucciones.* |

P: 9

Método de cálculo de cambio de divisas 1

Puede seleccionarse "División" o "Multiplicación" para el método de conversión de moneda nacional a moneda de divisas 1, y el cálculo se realiza de la forma siguiente:

En el caso de seleccionar "División" para el período 1,

Importe de moneda nacional (importe de moneda propia) ÷ Tasa de cambio de divisas 1 (tasa de cambio del EURO) = Importe de cambio de divisas 1 (importe en EURO)

En el caso de seleccionar "Multiplicación" para el período 2,

Importe de moneda nacional (importe en EURO) $\times$ Tasa de cambio de divisas 1 (tasa de cambio del EURO) = Importe de cambio de divisas 1 (importe en moneda nacional)

Impresión del importe total de cambio de divisas 1 e importe de la vuelta en el recibo/registro diario

Los importes total y de vuelta de cambio de divisas 1 se imprimen respectivamente debajo de los importes del total y de cambio de divisas en moneda nacional.

En el período 1, el importe en EURO que se convierte desde moneda nacional se imprime debajo de la moneda nacional, y en el período 2, se imprime la moneda nacional convertida desde el importe en EURO.

Impresión de validación del importe total de cambio de divisas 1 <sólo para la ER-A440>

El importe de cambio de divisas 1 convertido desde el importe total de ventas puede imprimirse en la impresión de validación para el importe total cuando el importe se recibe en metálico, cheque, o crédito.

Operación de metálico/crédito para cambio de divisas 1

Podrá ajustar si recibe el importe de divisas (cambio de divisas 1) en cheque o crédito, o en ninguno de los dos.

P: 9

Elemento:		Selección:	Registro:
A	Registrar siempre 0.		0
B	Método de cálculo de cambio de divisas 1	Multiplicación	0
		División	1
C	Operación de cheque/crédito para cambio de divisas 1	No	0
		Sí	1
D	Impresión del importe total de cambio de divisas 1 e importe de la vuelta en el recibo y registro diario	No	0
		Sí	1
E	Impresión del importe total de cambio de divisas 1 en impresión de validación	No	0
		Sí	1
F y **G**	Registrar siempre 0.		0
H	Impresión del logotipo gráfico en el pie del recibo	No	0
		Sí	1

| Nota | • *En el caso de que su caja registradora sea la ER-A440, registre siempre 0 para el elemento H.* |
| | • *En el caso de que su caja registradora sea la ER-A450, registre siempre 0 para el elemento E.* |
| | • *Los elementos B, D, y E se ajustan automáticamente mediante la operación de la tarea #800.* |

■ Programación del número de dígitos de detrás del punto decimal para las teclas de cambio de divisas PGM 2 2330

Nota	• Esta función se ha añadido recientemente para la introducción del EURO y no se describe en el manual de instrucciones. • Esta programación para la tecla de cambio de divisas 1 se efectúa automáticamente con la ejecución de la tarea #800.

Procedimiento

2330 ⟶ [•] ⟶ [⊗] ⟶ *Número de función ⟶ [⊗] ⟶ Número de dígitos de detrás del punto decimal (0-3) ⟶ [ST] ⟶ [TL]
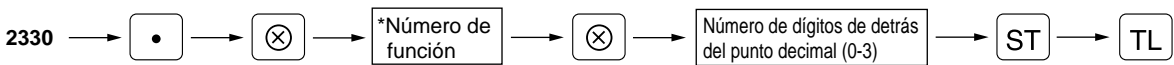
*Número de función:
52: Para la tecla [EX1]   53: Para la tecla [EX2]   54: Para la tecla [EX3]   55: Para la tecla [EX4]

Ejemplo

Operación de teclas

2330 [•] [⊗]
52 [⊗]
2 [ST]
[TL]

Impresión

```
F052  EXCH1          €  ──── Texto de descripción
        2      123. 456789 ┐      de la moneda
                           └─ Tasa de cambio
```
└─ Número de dígitos de detrás del punto decimal

■ Cambio de divisas en el modo REG

Si selecciona "Sí" para la operación de cheque/crédito para [EX1] en la programación de la tarea #2616, podrá manipular cheques y crédito para el importe de cambio de divisas 1. Por ejemplo, en el período 1, podrá recibir cheques y crédito en EURO cuando se trate en cambio de divisas 1 como divisas.

El importe de cambio de divisas 1 recibido en cheque y crédito se imprime en los informes (#100, #200, #130, #230, #131, #231, #50, #150, #250, #51, #151 y #251) como se muestra a continuación.

Muestra de informe:

```
EXCH1              0 Q
                €0. 00
DOM. CUR1         *0. 00
EX1CH+CR          1 Q  ┐── Contador y total de cheque 1-4/crédito 1-4 de cambio
                €5. 12 ┘    de divisas 1
DOM. CUR1        *10. 00 ─── Total de cheque 1-4/crédito 1-4 de cambio de divisas
                            1 en moneda nacional
```

Podrá cambiar el texto de la función empleado para el informe con la tarea #2314 en el modo PGM2. Para ver el procedimiento de programación, consulte el manual de instrucciones.

El número de función y el texto de ajuste inicial son como sigue:

N.° de función	Función	Ajuste inicial
140	Ventas con cheque + crédito de cambio de divisas 1	EX1CH+CR
141	Moneda nacional para ventas con cheque + crédito de EX1	DOM.CUR1

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